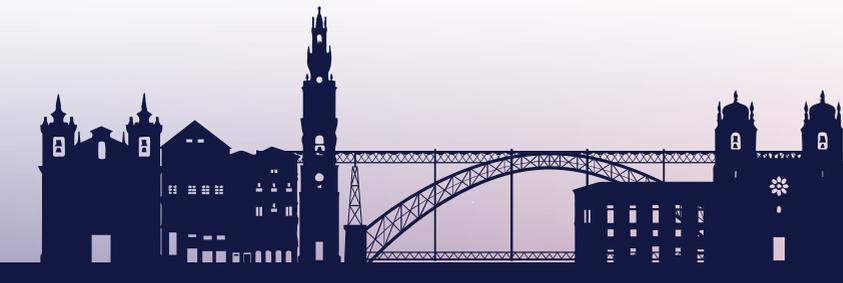




INTERNATIONAL  
SOCIETY FOR

# ISIDOG

INFECTIOUS  
DISEASES IN  
OBSTETRICS AND  
GYNECOLOGY



# 03<sup>rd</sup> ISIDOG Congress

PORTO - PORTUGAL

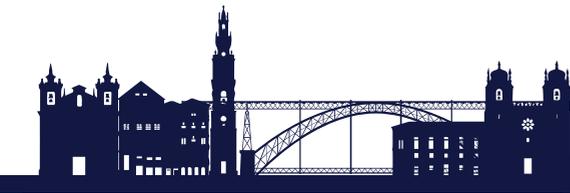
October 31 – November 02 . 2019  
HF Ipanema Park



## SCIENTIFIC PROGRAM

Digital Version

Access the digital version  
of the program with the abstracts



# 03<sup>rd</sup> ISIDOG Congress

## SCIENTIFIC PROGRAM

### ORGANIZING COMMITTEE

- José Martinez-de-Oliveira, MD, PhD** | Congress coordinator | Emeritus Professor, School of Health Sciences, Universidade da Beira Interior (UBI) | CICS-UBI Health Sciences Research Center Researcher, UBI
- Pedro Vieira-Baptista, MD** | ObGyn specialist (Centro Hospitalar São João, Porto, PT) | Secretary-General of the International Society for the Study of Vulvar Disease (ISSVD)
- Ana Palmeira-de-Oliveira, PharmD, PhD** | Invited professor, Universidade da Beira Interior (UBI) | CICS-UBI Health Sciences Research Center Researcher, UBI | CEO of Labfit-HPRD: Health Products Research and Development Lda
- Gilbert GG Donders, MD, PhD** | President of ISIDOG | Professor, Universitair Ziekenhuis Antwerpen | Obstetrics and Gynecology, General hospital H HART Tienen | Head of Femicare Research Tienen

### SCIENTIFIC COMMITTEE

#### MEMBERS FROM PORTUGUESE SPEAKING COUNTRIES

- Acácio G. Rodrigues, MD, PhD (Porto, PT)** | Associate Professor with Aggregation, Porto School of Medicine | Head, Laboratory of Microbiology, Porto School of Medicine | Anesthesiologist, Centro Hospitalar São João
- Ana Palmeira-de-Oliveira, PharmD, PhD (Covilhã, PT)** | Invited professor, Universidade da Beira Interior (UBI) | CICS-UBI Health Sciences Research Center Researcher, UBI | CEO of Labfit-HPRD: Health Products Research and Development Lda
- Carmen Lisboa, MD, PhD (Porto, PT)** | Assistant Professor, Porto School of Medicine | Dermatologist, Centro Hospitalar São João
- Cidália Pina-Vaz, MD, PhD (Porto, PT)** | Associate Professor, Porto School of Medicine | CINTESIS researcher, University of Porto | CEO of FASTinov
- Filomena Martins Pereira, MD, PhD (Lisboa, PT)** | Associate Professor with Aggregation, Instituto de Higiene e Medicina Tropical, Universidade Nova de Lisboa
- José Martinez-de-Oliveira, MD, PhD (Covilhã, PT)** | Emeritus Professor, School of Health Sciences, Universidade da Beira Interior (UBI) | CICS-UBI Health Sciences Research Center Researcher, UBI
- Márcia Guimarães da Silva, PhD (Botucatu, BR)** | Assistant Professor, Department of Pathology, Universidade Estadual Paulista Júlio de Mesquita Filho, Faculdade de Medicina de Botucatu
- Paulo Giraldo, MD, PhD (Campinas, BR)** | Full Professor ObGyn, Faculdade de Ciências Médicas (FCM), Universidade Estadual de Campinas (UNICAMP)
- Pedro Vieira-Baptista, MD (Porto, PT)** | ObGyn specialist (Centro Hospitalar São João, Porto, PT) | Secretary-General of the International Society for the Study of Vulvar Disease (ISSVD)
- Rita de Castro, PhD (Lisboa, PT)** | Assistant Professor, Instituto de Higiene e Medicina Tropical, Universidade Nova de Lisboa



## MEMBERS FROM ISIDOG COUNCIL

**Gilbert GG Donders, MD, PhD (BE)** | President of ISIDOG | Professor, Universitair Ziekenhuis Antwerpen | Obstetrics and Gynecology, General hospital H HART Tienen | Head of Femicare Research Tienen

**Ljubomir Petricevic, MD, PhD (AT)** | Associate Professor, Dept. of Obstetrics and Gynaecology, Medical University Vienna | ISIDOG Scientific Board Chairman | ESIDOG Austria 2nd Vice-President

**Per-Anders Mårdh, MD, PhD (SE)** | Professor Emeritus., Clinical Sciences, Dept. Obstetrics and Gynecology, Lund University, (Lund, SE)

**Peter Greenhouse, MD (UK)** | Consultant in Sexual Health (Emeritus), Bristol, UK | Vice President, ISIDOG

**Werner Mendling, MD, PhD (DE)** | Head of the German Center for Infections in Gynecology and Obstetrics, Wuppertal

## SPEAKERS

**Acácio Rodrigues** | Centro Hospitalar São João, Porto, Portugal

**Ana Gonçalves** | Centro Hospitalar Lisboa Central, Maternidade Dr. Alfredo da Costa, Lisboa, Portugal

**Ana Palmeira-de-Oliveira** | Universidade da Beira Interior, Covilhã, Portugal

**Bo Jacobsson** | University of Gothenburg, Sweden

**Camila Marconi** | Universidade Federal do Paraná, Brazil

**Carlos Sousa** | Laboratório de Anatomia Patológica, Unilabs, Portugal

**Carmen Rodríguez-Cerdeira** | Meixoeiro Hospital and University of Vigo, Spain

**Carmen Lisboa** | Porto School of Medicine, Centro Hospitalar São João, Porto, Portugal

**Christophe Depuydt** | AML Sonic Healthcare, Antwerp, Belgium

**Cidália Pina-Vaz** | Porto School of Medicine and FASTinov, University of Porto, Portugal

**Daniel Surbek** | University of Bern, Switzerland

**Fernanda Águas** | Centro Hospitalar e Universitário de Coimbra, Coimbra, Portugal

**Fernanda Geraldes** | Centro Hospitalar e Universitário de Coimbra, Coimbra, Portugal

**Filomena Martins Pereira** | Instituto de Higiene e Medicina Tropical, Universidade Nova de Lisboa, Portugal

**Gilbert Donders** | University of Antwerp & Femicare, Belgium

**Guy Mulinganya** | Catholic University of Bukavu, Congo

**Jack Sobel** | Wayne State University School of Medicine, USA

**José Martinez-de-Oliveira** | Universidade da Beira Interior, Covilhã, Portugal

**Kirsten Maertens** | University of Antwerp, Belgium

**Ljubomir Petricevic** | Medical University Vienna, Austria



**Luiz Pereira** | i3N - Institute of Nanostructures, Nanomodelling and Nanofabrication, Universidade de Aveiro, Portugal

**Márcia Guimarães Silva** | Botucatu Medical School, São Paulo State University, Brazil

**Maria João Carvalho** | Centro Hospitalar e Universitário de Coimbra, Coimbra, Portugal

**Mariana Costa** | Biologia Molecular, Unilabs, Porto, Portugal

**Marta Del Pino** | Hospital Clinic de Barcelona, Spain

**Paula Teixeira** | Universidade Católica Portuguesa, Porto, Portugal

**Paulo César Giraldo** | Universidade de Campinas, Brazil

**Paulo Paixão** | Universidade Nova de Lisboa, Portugal

**Pedro Vieira-Baptista** | Centro Hospitalar São João, Porto, Portugal

**Per-Anders Mårdh** | Lund University, Sweden

**Per-Goran Larsson** | Skaraborgs Hospital, Skövde, Sweden

**Peter Greenhouse** | Consultant in Sexual Health (Emeritus), Bristol, UK

**Risa A. Lonnee-Hoffmann** | St Olav Hospital, Trondheim, Norway

**Rita Castro** | Instituto de Higiene e Medicina Tropical, Universidade Nova de Lisboa, Portugal

**Rita Palmeira de Oliveira** | CNC, University of Coimbra, Coimbra; CICS-UBI, University of Beira Interior, Covilhã; Labfit - HPRD, Lda, Covilhã, Portugal

**Sarah Lebeer** | University of Antwerp, Department of Bioscience Engineering

**Tânia Freitas** | Hospital Dr. Nélio Mendonça, Funchal, Portugal

**Tatiana Ivanova-Rumantseva**

**Teresa Mascarenhas** | Porto School of Medicine, Centro Hospitalar São João, Porto, Portugal

**Udo B. Hoyme** | Ilm-Kreis-Kliniken, Arnstadt, Germany

**Werner Mending** | German Center for Infections in Gynecology and Obstetrics, Wuppertal, Germany



THURSDAY – OCTOBER 31<sup>ST</sup>

ISIDOG PORTUGUESE SPEAKING DAY

07:45h Opening of registration desk

08:45-09:00h **Opening, introduction and objectives**  
José Martinez de Oliveira (PT)

09:00-10:00h **SESSION 1 Feminine urogenital tract infections related problems updated**  
*Chairs:* Fernanda Águas (PT) & José Martinez de Oliveira (PT)

**Vaginal discharge: When & how is a syndromic approach adequate (15')**  
Filomena Martins Pereira (PT)

**The sexual partner: Balanoposthitis (15')**  
Carmen Lisboa (PT)

**Vulvovaginal diseases that look-like but aren't infectious (15')**  
Pedro Vieira Baptista (PT)

**Questions & answers (15')**

10:00-10:30h Coffee break

10:30-11:30h **SESSION 2 Vaginal ecology & atrophy – Atrophic vaginitis**  
*Chairs:* Teresa Mascarenhas (PT) & Pedro Vieira Baptista (PT)

**How to advise an adequate genital hygienic care (15')**  
Paulo Giraldo (BR)

**Vaginal atrophy & atrophic vaginitis: The GUSM (15')**  
Fernanda Águas (PT)

**The probiotic spectrum: Concepts & uses (15')**  
Ana Palmeira de Oliveira (PT)

**Questions & answers (15')**



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11:30-12:00h **SESSION 3 Innovation in therapy – Intracrinologic treatment**



**VVA: Innovation in Therapy**

The importance of DHEA. Prasterona – *Intrarosa*<sup>®</sup>

Fernanda Geraldes (PT) & Maria João Carvalho (PT)

12:00-13:30h **SESSION 4 (Lunch symposium) Clinical experience with HPV vaccine:**



INVENTING FOR LIFE

**Who? When? Why?**

Rational for vaccinate women with previously treated & infected

Pedro Vieira Baptista (PT)

HPV vaccination after treatment: The experience in Spain

Marta del Pino (ES)

13:30-14:00h **SESSION 5 Infections & contraception – The end of a myth**



Health is our mission

**Adolescence: Once a contra-indication to IUDs**

José Martinez de Oliveira (PT)

IntraUterine devices in Adolescence – Levosert<sup>®</sup>

Paulo Giraldo (BR)

14:00-15:00h **SESSION 6 Genital infections**

*Chairs:* Filomena Martins Pereira (PT) & Paulo Giraldo (BR)

**New challenges in HIV infection & Zika in common practice (15')**

Ana Gonçalves (PT)

**Recurrent vaginitis – How to diagnose (15')**

Tânia Freitas (PT)

**When is a microbiome based test desirable & how to interpret the result (15')**

Márcia Guimarães da Silva (BR)

**Questions & answers (15')**

15:00-15:30h Coffee break



15:30-16:30h **SESSION 7 The microbiologic lab as an aid**  
*Chairs:* Márcia Guimarães da Silva (BR) & Ana Palmeira de Oliveira (PT)  
**Urinary tract infection: How can we speed the diagnostic result (15')**  
Cidália Pina-Vaz (PT)  
**Curable STIs: Classical or new methodologies? (15')**  
Rita Castro (PT)  
**New options on perinatal Group B streptococcus colonization (15')**  
Mariana Costa (PT)  
**Questions & answers (15')**

16:30-17:00h **SESSION 8 Free communications I**  
*Chairs:* Pedro Vieira Baptista (PT) & Ana Palmeira de Oliveira (PT)  
**Oral communications I** (See page 14 from digital version of the program)  
**OC 01** Infecção por *T. pallidum* e vírus da imunodeficiência humana (HIV) e da hepatite B (HBV) em Benguela, Angola  
**OC 02** Avaliação da ligação intrínseca da recorrência da candidose vulvovaginal à expressão de fatores de virulência

## 03<sup>RD</sup> ISIDOG CONGRESS

18:30-18:45h **Opening, introduction, welcome words & program overview**  
Gilbert Donders (BE)

18:45-19:15h **SESSION 1 Opening conference**  
*Chair:* Gilbert Donders (BE)  
**Coexistent life behaviours**  
José Martinez de Oliveira (PT)

19:30h **Welcome Dinner**



# 03<sup>rd</sup> ISIDOG Congress

## FRIDAY – NOVEMBER 01<sup>ST</sup>

08:00h Opening of registration desk

08:30-09:30h **SESSION 2 Free communications II**

*Chairs:* Gilbert Donders (BE) & Ana Palmeira-de-Oliveira (PT)

**Oral communications II** (See page 16 from digital version of the program)

**OC 03** Preterm rupture of membranes and cervicovaginal flora

**OC 04** Suspicion of chorioamnionitis, inflammatory markers and neonatal outcomes

**OC 05** Diagnosis of chorioamnionitis with foetal response and admission in a neonatal intensive care unit

**OC 06** Protein cargo in exosomes from peripheral blood of women in preterm labor and preterm premature rupture of membranes

09:30-10:45h **SESSION 3 Obstetrical & neonatal microbiology & Infections**

*Chairs:* Gilbert Donders (BE) & Christophe Depuydt (BE)

**The vaginal environment throughout pregnancy (15')**

Ljubomir Petricevic (AT)

**Risk factors and pregnancy outcome of Candida in Central Africa (15')**

Guy Mulinganya (CG)

**Neonatal colonization with maternal flora (15')**

Risa Lonnee-Hoffmann (NO)

**Prevention of preterm birth as a political task (15')**

Udo Hoyme (DE)

**Questions & answers (15')**

10:45-11:15h Coffee break



11:15-12:30h **SESSION 4 Ob-gyn infections – Large topics**

*Chairs:* Ljubomir Petricevic (AT) & Udo Hoyme (DE)

**Congenital CMV: *Quo vadis?* (15')**

Paulo Paixão (PT)

**Maternal immunization for mothers and offspring: Pertussis & more (15')**

Kirsten Maertens (BE)

**Respiratory tract pathogens causing genitoUrinary infections (and vice-versa) (15')**

Per-Anders Mårdh (SE)

**ISIDOG Guidelines for a forgotten silent killer: Group A *streptococcus* (15')**

Gilbert Donders (BE)

**Questions & answers (15')**

12:30-14:00h **SESSION 5 (Lunch symposium) Vaginal strategies at large**

 medinova

**The important role of lactobacilli and estriol in menopause and restoration**

Gilbert Donders (BE)

**Maternal microbiome and pregnancy complications: Therapeutical implications**

Daniel Surbek (SH)

***Dequalinium Chloride* in BV: New evidence for a valuable biofilm disruptor**

Ana Palmeira de Oliveira (PT)

14:00-15:15h **SESSION 6 Vulvovaginal infections – I**

*Chairs:* Per-Anders Mårdh (SE) & José Martinez-de-Oliveira (PT)

**Teaching impact on diagnostic performance (15')**

Werner Mendling (DE)

**New insights of understanding and treatment of recurrent bacterial vaginosis (15')**

Jack Sobel (US)

**Microbioma and biofilms – New diagnostic and therapeutic options (15')**

Tatiana Ivanova-Rumantseva (RU)

**A new diagnostic test for BV as a test of cure and new idea about treatment of BV (15')**

Per-Göran Larson (NO)

**Questions & answers (15')**

15:15-15:45h Coffee break



15:45-17:00h **SESSION 7 Vulvovaginal infections – II**

*Chairs:* Werner Mendling (DE) & Ana Palmeira-de-Oliveira (PT)

**Antifungal resistance of *C albicans* (15')**

Jack Sobel (US)

**Environmental explanations & mechanisms for *Candida spp* resistancy (15')**

Acácio Rodrigues (PT)

**Probiotics for *Candida* vulvovaginitis? (15')**

Sarah Lebeer (BE)

**Herbal oils for vulvovaginal problems – Uses, Inconvenients & Challenges (15')**

José Martinez-de-Oliveira (PT)

**Questions & answers (15')**

17:00-18:30h **SESSION 8 Free communications III**

*Chairs:* Gilbert Donders (BE) & Ana Palmeira-de-Oliveira (PT)

**Oral presentation of selected Posters** (See page 29 from digital version of the program)

**PO 02** Chagas disease: Prenatal screening in Madeira island

**PO 03** Is prenatal toxoplasmosis screening cost effective in reducing fetal transmission of infection?

**PO 04** Dapivirine vaginal ring – An approach to hiv pre-exposition prophylaxis

**PO 08** Revaccination with the human papilloma virus nonavalent vaccine  
– Is there a benefit?

**PO 09** Vaginal colonization in women admitted for threatening preterm labor (PTL)  
– 5 years retrospective cohort

**PO 11** Obstetric outcomes in women with Hepatitis C – Overview of the last 22 years  
in Madeira island

**PO 106** Human leukocyte antigen class II alleles and risk of cervical precancerous lesions

**PO 107** Citomegalovirus infection in pregnancy: Maternal infection type vs one-year  
neonatal outcome

**PO 108** Antibiotic prophylaxis in contemporary gynecology: More light and fewer shadows

**PO 109** MicroRNAs from circulating exosomes are differently expressed in preterm  
pregnancies

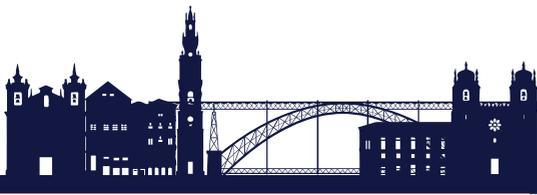
**PO 110** Serum inflammatory markers of pregnant women in labour and puerperium

**PO 111** HPV – Are the histologic results of transformation zone loop excisions  
consistent with our expectations?

**Oral communications III** (See page 19 from digital version of the program)

**OC 07** The impact of influenza virus infection on pregnant women – A 5-year  
retrospective study

**OC 08** Syphilis in pregnancy is still a reality – A 22-year retrospective study



SATURDAY, NOVEMBER 02<sup>ND</sup>

07:30h Opening of registration desk

08:00-09:30h **SESSION 9 Free communications IV**

*Chairs:* Gilbert Donders (BE) & Ana Palmeira-de-Oliveira (PT)

**Oral communications IV** (See page 20 from digital version of the program)

**OC 09** Immunosuppression and genital hpv lesions in solid organ transplanted women

**OC 10** Development and validation of a multiplex-pcr to detect the presence of house dust mites in vaginal samples

**OC 11** Investigation of the composition of the microbiome of recurrent vulvovaginal candidosis

**OC 12** A phase 2b, dose-finding study evaluating oral ibrexafungerp in moderate to severe acute vulvovaginal candidiasis (dove)

**OC 13** Elucidating the role of lactobacillus crispatus in cytolytic vaginosis: From pathogen to treatment

**OC 14** Possible associations of the novel described gardnerella species and virulence properties

09:30-11:00h **SESSION 10 STIs**

*Chairs:* Jack Sobel (US) & Pedro Vieira Baptista (PT)

**How HPV compromises fertility (15')**

Christoph Depuydt (BE)

**The vaginal microbiome of adult women as a predictor of cervical HPV (15')**

Camila Marconi (BR)

**HPV and genital cancer in lesbian, gay, bisexual and transgender (LGBT) people (15')**

Carmen R. Cerdeira (ES)

**Partner tracing of STI (15')**

Peter Greenhouse (UK)

**The STI strategy in view of Fast-sex app (15')**

Paulo Giraldo (BR)

**Questions & answers (15')**



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11:00-11:30h Coffee break

11:30-13:00h **SESSION 11 Free communications V**

*Chairs:* Gilbert Donders (BE) & Ana Palmeira-de-Oliveira (PT)

**Oral communications V** (See page 25 from digital version of the program)

**OC 15** Association between sexually transmitted infections and cervical precancerous lesions in selected Latvian population

**OC 16** The influence of HIV viral load and CD4 count on pap-smear results: A prospective cohort study in a tertiary center

**OC 17** Influence of CD4 count on the prevalence of high-risk HPV infection and cervical cytological abnormalities in HIV-positive women

**OC 18** Prevalence and vertical transmission of syphilis, HIV, HBV and HCV in parturients from southern angola (Iubango)

**OC 19** Group B streptococcal infection – Clinical and placental histology correlation

**OC 20** Intrapartum fever and neonatal sepsis – The role of Group B Streptococcus colonization

13:00-14:30h Lunch break

14:30-15:45h **SESSION 12 Probiotic approaches**

*Chairs:* Paulo Giraldo (BR) & José Martinez-de-Oliveira (PT)

**Prevention of preterm labor: Do we use probiotics or it is all in the genes? (15')**  
Bo Jacobsson (NO)

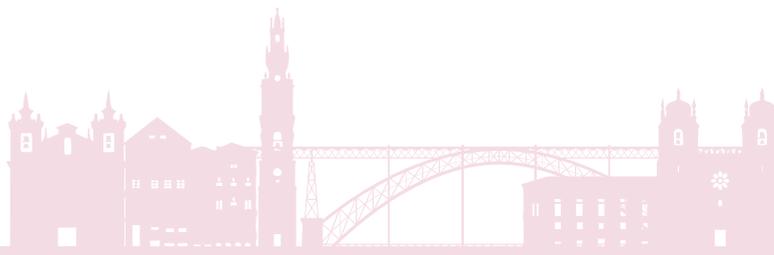
**Foodprobiotics & vulvoVaginal health (15')**  
Paula Teixeira (PT)

**Probiotics profile is changing: From supplements to devices to pharma drugs (15')**  
Ana Palmeira-de-Oliveira (PT)

**Vaginal lubricants & Infection (15')**  
Rita Palmeira-de-Oliveira (PT)

**Questions & answers (15')**

15:45-16:15h Coffee break



16:15-17:30h **SESSION 13 Technological developments**

*Chairs:* Gilbert Donders (BE) & Ana Palmeira-de-Oliveira (PT)

**HPV methylation testing as a diagnostic tool (15')**

Carlos Sousa (PT)

**Modulating the vagina as route for drug delivery (15')**

Rita Palmeira-de-Oliveira (PT)

**Speeding up the answer in antibiotic susceptibility testing (15')**

Cidália Pina-Vaz (PT)

**Electronic devices for POC diagnosis of infections:**

**“eNose” and “eTongue” (15')**

Luiz Pereira (PT)

**Questions & answers (15')**

17:30-18:00h **Congress closing ceremony & awards**

Gilbert Donders (ISIDOG President)



## ORAL COMMUNICATIONS

16:30-17:00h | Thursday – October 31<sup>st</sup>

### SESSION 8 Free communications I

*Chairs:* Pedro Vieira Baptista (PT)  
& Ana Palmeira de Oliveira (PT)

#### Oral communications I

#### OC 01

### INFEÇÃO POR T. PALLIDUM E VÍRUS DA IMUNODEFICIÊNCIA HUMANA (HIV) E DA HEPATITE B (HBV) EM BENGUELA, ANGOLA

Yefimenko Lesya; Rita Castro; João Piedade; Filomena Pereira

*Global Health and Tropical Medicine (GHTM), Instituto de Higiene e Medicina Tropical (IHMT), Universidade Nova de Lisboa (UNL), Lisboa, Portugal*

**Introdução:** As Infecções Sexualmente Transmissíveis (IST) são mais prevalentes nos países de fracos e médios recursos (LMIC). A hepatite B (HBV) e as infecções pelo vírus da imunodeficiência humana (HIV) e por *Treponema pallidum* (TP) têm os mesmos mecanismos de transmissão. Estas apresentam grande morbidade e mortalidade sendo que, em Angola, os dados são limitados e contraditórios.

**Objetivos:** 1) Determinar a taxa de infecção por TP, HIV e HBV e a taxa de co-infecção destas doenças; 2) Analisar os fatores sociodemográficos e de risco para IST

**Resultados:** Participaram 300 indivíduos, 62,3% (187) sexo feminino e 37,7% (113) sexo masculino. O grupo etário mais representado foi o dos 20 aos 39 anos, 62,3% frequentaram o ensino primário, 21,3% secundário, 49% viviam

maritalmente, 17,3% solteiros, 81% viviam em zona urbana.

No que diz respeito a fatores de risco, 91% tinham iniciado a sua vida sexual. Em relação aos parceiros sexuais nos últimos seis meses, 12,1% (33/273) tiveram apenas um, 33% (90/273) dois e 23,8% (65/273) três. A partilha de material de manicure/pédicure, material de barbear ou escova de dentes foi referida por 15,7%, 10,7% apresentavam piercings, 9% tatuagens. Abortos provocados, submissão a intervenções cirúrgicas, contacto com feridas e tratamento com cortes foram relatados por 6,5%, 8%, 7% e 14,7%, respetivamente. A medicina tradicional foi mencionada por 11,3%. A taxa de infecção por TP foi de 2%, 1,7% (5/300) para infecção por TP tratada, 10,3% pelo HIV, 8,3% (25/300) por HBV. O DNA de HBV foi identificado em 68/300 (22,7%) amostras nas quais não tinha sido detetado o AgHBs [(hepatite B oculta (HBO)]. A infecção pelo HIV foi diagnosticada em 15/68 (22,1%) indivíduos com HBO. A co-infecção mais frequentemente encontrada foi HIV/HBV (7,7%), 2,7% com AgHBs e os restantes (5%) com HBO, HIV/TP (0,7%) e HIV-1 e 2 (1/300). Não foi diagnosticada nenhuma co-infecção HBV/TP.

**Conclusões:** As elevadas taxas de infecção pelos microrganismos estudados parecem indicar a necessidade de conhecer melhor o perfil epidemiológico das mesmas em Angola, de modo a desenhar programas de prevenção e controlo que melhor se adequem a este país. A elevada taxa de hepatite B oculta é preocupante, principalmente em indivíduos infetados com HIV, uma

vez que esta não se deteta a não ser através da pesquisa de DNA. Esta situação proporciona um número maior de infecções silenciosas, com consequente transmissão e aparecimento de novos casos.

## OC 02

### **AVALIAÇÃO DA LIGAÇÃO INTRÍNSECA DA RECORRÊNCIA DA CANDIDOSE VULVOVAGINAL À EXPRESSÃO DE FATORES DE VIRULÊNCIA**

Paula Faria-Gonçalves<sup>1</sup>; Joana Rolo<sup>1</sup>; Carlos Gaspar<sup>1,2</sup>; Ana Sofia Oliveira<sup>1</sup>; Rita Palmeira-de-Oliveira<sup>1,2,3</sup>; José Martinez-de-Oliveira<sup>1,3</sup>; Ana Palmeira-de-Oliveira<sup>1,2</sup>  
<sup>1</sup>CICS-UBI: Health Sciences Research Center, Faculty of Health Sciences, University of Beira Interior, Covilhã, Portugal; <sup>2</sup>Labfit-HPRD: Health Products Research and Development Lda, Covilhã, Portugal; <sup>3</sup>Center for Neuroscience and Cell Biology, University of Coimbra, Coimbra, Portugal

**Introdução:** Várias características fenotípicas dos fungos do género *Candida* spp., têm sido associadas à patogenicidade destes microrganismos, pelo que podem estar relacionadas com a capacidade da recorrência da candidose vulvovaginal.

**Objetivos:** Avaliar diferenças na expressão de fatores de virulência de espécies de *Candida* spp., obtidas de mulheres enquadradas em dois grupos clínicos, candidose vulvovaginal (CVV) e candidose vulvovaginal recorrente (CVVR).

**Metodologia:** Identificámos as espécies do género *Candida* spp. isoladas de 32 mulheres (16 casos CVVR e 16 casos CVV) por análise automática dos perfis bioquímicos; destas avaliámos a sua semelhança genética através da análise dos perfis de ADN (tipagem molecular por RAPD). Avaliámos também a capacidade de formar biofilmes, de formar tubo germinativo e de produzir fosfolipases. As diferenças obtidas em relação à proporção de isolados que expressam cada fator de virulência foram determinadas por análise estatística ( $\chi^2$ ).

**Resultados:** *C. albicans* foi a espécie mais frequente. A avaliação dos perfis de DNA de isolados consecutivos (CVVR) revelou que estes estão maioritariamente relacionados. Verificamos que não houve diferenças significativas entre os grupos clínicos ( $p < 0.05$ ), para as estirpes fortemente aderentes (CVV: 19% *C. albicans*, 13% *C. glabrata*, 31% *C. guilliermondii*; CVVR: 24% *C. albicans*, 14% *C. glabrata*, 11% *C. guilliermondii*). No grupo clínico da CVV e considerando apenas os isolados *C. albicans*, verificou-se uma maior capacidade de produzir tubos germinativos (CVV: 29%; CVVR: 4%;  $p < 0.05$ ). Em relação à produção de fosfolipase, não foram encontradas diferenças significativas entre os isolados CVV (13% *C. albicans*) ou CVVR (9% *C. albicans*; 2% *C. glabrata*).

**Conclusões:** Nos dois grupos clínicos a espécie que apresentou maior expressão dos fatores de virulência foi *C. albicans*. A CVVR, na maioria dos casos, foi causada por isolados relacionados entre si, sugerindo persistência do isolado recorrente na mucosa vaginal com modulação ao longo do tempo da expressão dos fatores de virulência. A formação de biofilme e as alterações fenotípicas associadas à formação de tubos germinativos podem ser fatores importantes para a infeção em casos agudos e esporádicos de CVV, e a recorrência poderá estar relacionada com a atenuação da expressão dos fatores de virulência.

## SESSION 2 Free communications II

Chairs: Gilbert Donders (BE)  
& Ana Palmeira-de-Oliveira (PT)

### Oral communications II

#### OC 03

### PRETERM RUPTURE OF MEMBRANES AND CERVICOVAGINAL FLORA

Susana Costa<sup>1</sup>; Beatriz Teixeira<sup>1</sup>; Luísa Cerqueira<sup>1</sup>; Marina Moucho<sup>1</sup>; Nuno Montenegro<sup>1,2</sup>

<sup>1</sup>Department of Obstetrics and Gynaecology, São João Hospital Center, Porto, Portugal; <sup>2</sup>Medicine Faculty, University of Porto, Porto, Portugal

**Introduction:** Preterm premature rupture of membranes (PPROM) occurs in 2-3% of pregnancies and is responsible for nearly one third of all preterm births. Abnormal colonization of cervicovaginal (CV) flora seems to be associated with PPRM, but it is controversial whether it is cause or consequence. Chorioamnionitis (CAM) occurs in one third of pregnant woman with PPRM.

**Goals:** To correlate CV pathogens with latency period (days between PPRM and labor) and frequency of CAM and funisitis.

**Methods:** Retrospective study of 71 pregnant women admitted by PPRM between January/2014 and August/2019 with cv specimens collected at admission. The study variables (maternal risk factors for PPRM, gestational age at PPRM and labor, vaginal and endocervical swabs, mode of delivery, signs or symptoms of CAM, placenta histology and microbiology, mode of delivery and neonatal outcomes) were collected using Obscare® database and analysed through IBM SPSS®.

**Results:** The median gestational age at PPRM and at birth was 32 weeks and 33 weeks and 4 days, respectively. Spontaneous labor was observed in 53 pregnant women. CV specimens were collected for vaginal and endocervical bacteriological screening - Group B Streptococcus (GBS), Ureaplasma urealyticum, Mycoplasma

hominis, Neisseria Gonorrhoeae and Chlamydia Trachomatis were positive in 42,2% (n=19), 31,4% (n=16), 17% (n=8), 46,7% (n=21), 4,4% (n=1), 0% and 7,1% (n=2), respectively. Escherichia coli and Gardnerella vaginalis were isolated in 9 of the 68 CV bacteriological swabs. There was no statistically significant difference between CV bacteriological infection and latency period except for G. vaginalis (median latency period of 2 days if positive and 8 days if negative, p=0,045). U. urealyticum was the only specimen positively associated with spontaneous preterm birth (p=0.002). In respect to placenta histology, CAM was observed in 66,1% (n=39) and funisitis in 30,5% (n=18). There was no statistically significant association between histology and CV isolates. The most frequent isolated agent in microbiological of placenta was E. coli (6/11).

**Conclusion:** G. vaginalis and U. urealyticum seem to have implications in latency period and spontaneous preterm birth, respectively. As mentioned by other authors, we did not find any relationship between GBS colonization and latency period or risk of CAM. However, some articles establish a relationship between U. urealyticum colonization and CAM that was not corroborated in this study.

#### OC 04

### SUSPICION OF CHORIOAMNIONITIS, INFLAMMATORY MARKERS AND NEONATAL OUTCOMES

Carolina Carneiro<sup>1</sup>; Sara Bernardes da Cunha<sup>1</sup>; Inês Reis<sup>1</sup>; Matilde Martins<sup>1</sup>; Cátia Rasteiro<sup>1,2</sup>; T. Teles<sup>1</sup>

<sup>1</sup>Centro Hospitalar entre o Douro e Vouga, EPE, Santa Maria da Feira, Portugal; <sup>2</sup>Faculdade de Ciências da Saúde, Universidade da Beira Interior, Covilhã, Portugal

**Introduction:** Chorioamnionitis (CA) occurs in 1-4% of deliveries. Intrapartum fever is a key criterion. Furthermore, suspected triple I features include fever and at least one other findings (maternal leucocytosis, foetal tachycardia and puru-

lent fluid from the cervical os). Although C-reactive protein (CRP) was moderately predictive of histologic CA, it does not appear to be useful on diagnosis or predicting neonatal infection.

**Goals:** To evaluate the association of maternal white blood cell count and CRP with suspected triple I, histological placental CA diagnosis and neonatal infection.

**Methods:** A retrospective analysis of clinical records of women with delivery in our hospital (January 2016 – August 2019) with diagnosis of intrapartum fever was made. Data from maternal leucocytosis and CRP and histological examination of the placenta were assessed as well as maternal characteristics, pregnancy outcomes and neonatal outcomes.

**Results:** A hundred and ninety-two cases were selected, with 38 neonates admitted to neonatal intensive care unit (NICU). In 24 neonates, diagnosis of early infection was made.

Data from maternal leucocytosis and CRP was available in 109 cases. The median maternal leucocytosis and CRP was 17.5 (QR 14.1-19.3) and 22 (QR 11.5-38.4) respectively. No differences on these analytical parameters were found between the neonates admitted to NICU or with confirmed neonatal infection. Considering only leucocytosis superior to 15.000, the results were similar.

Histological examination of the placenta was available in 160 cases. Histological CA was confirmed in 130. Stage 2 or more was present in 109 cases. Serum maternal leucocytosis wasn't different between those with or without histological CA diagnosis. Serum maternal CRP was more often positive in histological CA stage 2 or superior (44,15 versus 16,11,  $p=0.001$ ).

In cases of clinical suspicion of CA there was a higher rate of neonatal infection.

**Discussion/conclusion:** In our study, maternal leucocytosis in suspected triple I CA was not associated with histological CA, but maternal elevated CRP was. Both markers were not associated with neonatal NICU admission or neonatal

infection. Maternal antibiotic empiric treatment may be a confounder.

Other markers that are easily and promptly obtained during labour and accurately predict clinical outcome must be studied in order to improve approach.

## OC 05

### DIAGNOSIS OF CHORIOAMNIONITIS WITH FOETAL RESPONSE AND ADMISSION IN A NEONATAL INTENSIVE CARE UNIT

Carolina Carneiro<sup>1</sup>; Sara Bernardes da Cunha<sup>1</sup>; Inês Reis<sup>1</sup>; Patrícia Ferreira<sup>1</sup>; Cátia Rasteiro<sup>1,2</sup>; Teresa Teles<sup>1</sup>

<sup>1</sup>Centro Hospitalar entre o Douro e Vouga, EPE, Santa Maria da Feira, Portugal; <sup>2</sup>Faculdade de Ciências da Saúde, Universidade da Beira Interior, Covilhã, Portugal

**Introduction:** Chorioamnionitis (CA) is a common event (1-4% of pregnancies). Intrapartum fever is a key criterion but clinically defined CA correlates poorly with histological chorioamnionitis, the gold standard. In the presence of histological CA, foetal response is associated with new-born adverse outcomes and neurodevelopment impairment.

**Goals:** To evaluate the association of intrapartum fever and histological diagnosis of CA.

To determine the association of foetal inflammatory response with admission and length of stay in neonatal intensive care unit (NICU).

**Methods:** Retrospective analysis of clinical records of pregnant women and respective newborn with delivery in our hospital (January 2016 – August 2019) with diagnosis of intrapartum fever and available histological placental analysis. According to the presence of foetal inflammatory response in the placental histological analysis, two groups were compared. Maternal characteristics, pregnancy and neonatal outcomes were assessed.

**Results:** A hundred and sixty pregnancies were selected. Histopathological CA was confirmed in 130 cases. Admission to NICU occurred in 34

neonates. Median of stay was 4 days (Interquartile interval 3-6). No differences were found between groups in maternal age, gestational age at delivery, labor induction, type of delivery or neonatal birth weight percentile. Neonates whose placenta had CA with had a significantly higher admission rate in NICU ( $p=0.037$ ) when compared to those who did not had foetal response. No differences were found in the length of stay in NICU between groups.

**Discussion/Conclusions:** In our population, foetal response was associated with higher NICU admission, but not with length of stay. This can be related with the size of sample. Although foetal inflammatory response may be a predictor of bad outcomes, its value in clinical practice is questionable because histological results are available with delay. Long term neurodevelopment evaluation was not assessed, so no conclusions can be made on CA influence in neurodevelopment.

Other markers (clinical or histological) must be studied in order to establish algorithms that allow an individual approach with different grades of management of new-born and children.

## OC 06

### PROTEIN CARGO IN EXOSOMES FROM PERIPHERAL BLOOD OF WOMEN IN PRETERM LABOR AND PRETERM PREMATURE RUPTURE OF MEMBRANES

Júlia Abbade Tronco; Bruna Ribeiro de Andrade Ramos; Márcia Guimarães da Silva  
*São Paulo State University (UNESP), São Paulo, Brazil*

**Introduction:** Preterm labor (PTL) and Preterm Premature Rupture of Membranes (PPROM) are major health concerns worldwide for which there are still no reliable biomarkers. Exosomes are vesicles responsible for intercellular communication that may carry potential biomarkers.

**Goal:** The aim of this study was to evaluate the expression of C1INH (C1 inhibitor) and A2MG (alfa-2-macroglobulin) in exosomes isolated from blood plasma in the context of spontaneous rupture birth.

**Methods:** Peripheral blood was collected from pregnant women with PTL, PPRM, term birth in labor (TL) and out of labor (T) ( $n=8$  for each group), seen at Botucatu Medical School, SP, Brazil. Plasma was obtained and the exosomes were isolated by ultracentrifugation, and then analyzed by Nanoparticle Tracking Analysis (NTA). After protein extraction of the samples, Western Blot (WB) was performed to identify and quantify C1INH, A2MG, and the positive and negative controls - CD9 and cytochrome C. Protein quantification was performed using the Image J software and statistical analysis were performed by Mann-Whitney test on Prism.

**Results:** Mean gestational age for each group was: PTL: 34w 6d  $\pm$  2w6d, PPRM: 34w 2d  $\pm$  1w 5d, TL: 39w 5d  $\pm$  1w 2d and T: 38w 5d  $\pm$  3d. Isolation of exosomes was confirmed by NTA and WB. The protein C1INH was significantly higher on PPRM group when compared to the Term group [1.22 (1.11 - 1.32) vs. 1.02 (0.93 - 1.05)  $p=0.0004$ ]. In accordance, when we compared both preterm groups (PTL + PPRM) to the term groups (TL + T) C1INH was significantly higher among preterm patients [1.14 (1.06 - 1.34) vs. 1 (0.9 - 1.05)  $p=0.0014$ ]. Regarding A2MG there was no statistical difference between any of the groups.

**Discussion:** C1INH has been previously associated with preterm birth in first trimester samples. In accordance, the increased level of circulating C1INH in third trimester patients with PTL and PPRM demonstrated in the present study is an important data to delve into since C1INH acts on the inhibition of spontaneous activation of the complement system. Also it is known that several complications, including preterm birth, are associated with aberrant complement activation in women with complement system disorders. Still, longitudinal studies are needed to confirm the potential of this protein as a biomarker for spontaneous preterm birth.

17:00-19:00h | Friday – November 01<sup>st</sup>

## SESSION 8 Free communications III

*Chairs:* Gilbert Donders (BE)

& Ana Palmeira-de-Oliveira (PT)

### Oral communications III

#### OC 07

### THE IMPACT OF INFLUENZA VIRUS INFECTION ON PREGNANT WOMEN – A 5-YEAR RETROSPECTIVE STUDY

Rita Leiria Gomes; Carlos Macedo; Ana Calhau; Rita Salgueiro Neto; José Alves; Tânia Freitas; Hugo Gaspar; Cremilda Barros; Graça Andrade  
*Hospital Dr. Nélio Mendonça, Funchal, Portugal*

**Introduction:** Influenza virus infection is a significant cause of morbidity and mortality among pregnant women. Since 2009 pandemic, the effects of influenza on pregnancy outcomes are well established, such as spontaneous abortion, preterm birth, and fetal distress. Therefore, all pregnant women should be immunized, and early antiviral treatment is also recommended.

**Goals:** To describe the effects on maternal health and pregnancy outcomes of influenza virus infection in pregnant women.

**Methods:** Retrospective cohort study of the pregnant women with clinical suspicion and laboratorial confirmation of influenza virus infection, in Hospital Dr. Nélio Mendonça, between 2014 and 2019. Variables collected: women's age; personal history; gestational age; maternal complications and obstetric outcomes.

**Results:** We studied 96 pregnant woman who went to emergency department of Hospital Dr. Nélio Mendonça, between 2014 and 2019, with signs and symptoms of influenza infection and collected nasopharyngeal swabs for testing. The mean age was 31 years old. Positive results for influenza virus occur in 42 of the pregnant women. In this group, 86% presented fever and 95% had respiratory symptoms. The positive laboratory results were 93% influenza A, which 26% were positive for subtype H1N1 and 23% for H3N2e. The other 7% were positive for influenza B virus.

When comparing by years, we noticed that positive results for H1N1 and H3N2e occurred in flu seasons of 2017/2018 and 2018/2019. None had immunosuppression, but 10% had asthma and 12% were smokers. The gestational age during infection were mainly in third trimester (46%) and second trimester (37%). Hospitalization was required in 21% of the cases. Only 48% received antiviral treatment with oseltamivir, but none had serious health complications. We couldn't determine how many was immunized. The adverse obstetric outcomes reported were 6 cases of threatened preterm labor and 10% had a preterm birth, one case at 26 weeks of pregnancy due to placental abruption, causing stillbirth.

**Conclusions:** Although influenza virus testing is not required to make a clinical diagnosis of influenza infection, it is recommended for all patients who are being admitted to hospital. Treatment with antivirals reduces the duration of symptoms and the risk of some complications, hospitalization, and mortality. Annual vaccination is the best method for preventing or mitigating the impact of influenza.

#### OC 08

### SYPHILIS IN PREGNANCY IS STILL A REALITY – A 22-YEAR RETROSPECTIVE STUDY

Rita Leiria Gomes; Ana Calhau; Rita Salgueiro Neto; Carlos Macedo; Tânia Freitas; Patrícia Silva; Hugo Gaspar; Cremilda Barros  
*Hospital Dr. Nélio Mendonça, Funchal, Portugal*

**Introduction:** Syphilis in pregnancy can lead to adverse outcomes, including early fetal loss, stillbirth, preterm delivery, neonatal death, and congenital disease among newborns. Adequate treatment of maternal infection can prevent transmission to the fetus. Therefore, serological screening during pregnancy and preconception period is important to reduce the incidence of congenital syphilis.

**Goals:** To characterize the pregnant women with diagnosis of syphilis in Hospital Dr. Nélio Mendonça and describe the obstetric and neonatal outcomes.

**Methods:** Retrospective cohort study of the pregnant women with diagnosis of syphilis in Hospital Dr. Nélio Mendonça, between 1997 and 2018. Variables collected: women's age; personal history; surveillance of pregnancy; diagnosis and treatment of syphilis; obstetric and neonatal outcomes.

**Results:** We report 66 cases of syphilis in pregnant and postpartum women, with an average age of 26 years. Two cases were excluded, since one resulted in an early abortion and another in an ectopic pregnancy. The diagnosis of syphilis was made mainly in first trimester of pregnancy (38%), and in 27%, 22% and 9% was made in the second trimester, third trimester and puerperium, respectively. Most of these pregnancies were followed at the hospital (70%), but 25% had late surveillance and 5% didn't have any surveillance. Antibiotic treatment was made during pregnancy in 76% of the cases, 2% during preconception and 17% in the puerperium. The main risk factors were teenage pregnancy (8%), drug addiction of the mother (9%) and his partner (5%), alcoholism (8%) and presence of psychiatric disorder (12%). Concomitant hepatitis B infection were present in 14%, hepatitis C in 5% and 3% had both. The adverse outcomes were one case of late fetal death, 14% of preterm births, 9% of newborns with an Apgar score less than 7 in first minute, 12 cases of congenital syphilis, which two of them died in the first month of life. Our rate of syphilis among pregnant women was 12,14 per 10000 births.

**Conclusions:** Syphilis is easily diagnosed with serological non-expensive tests and can be effectively treated with penicillin, which prevents transmission to the fetus. However, syphilis remains a significant public health problem globally, including in Madeira Island. Therefore, we should increase the awareness on this problem, particularly in the risk groups, in order to prevent more cases of adverse outcomes related to syphilis infection in pregnancy.

08:00-09:30h | Saturday, November 02<sup>nd</sup>

## SESSION 9 Free communications IV

*Chairs:* Gilbert Donders (BE)  
& Ana Palmeira-de-Oliveira (PT)

### Oral communications IV

#### OC 09

### IMMUNOSUPPRESSION AND GENITAL HPV LESIONS IN SOLID ORGAN TRANSPLANTED WOMEN

Antunes D.<sup>1,2</sup>; Hundarova K.<sup>1,3</sup>; Rolha A.<sup>1</sup>; Silva C.<sup>1</sup>; Ramos V.<sup>1</sup>; Caramelo O.<sup>1</sup>; Marques J.P.<sup>1</sup>; Rebelo T.<sup>1,3</sup>; Águas F.<sup>1</sup>

<sup>1</sup>Gynecology Department, Centro Hospitalar e Universitário de Coimbra, Coimbra Portugal; <sup>2</sup>Faculty of Medicine, University of Coimbra, Coimbra, Portugal; <sup>3</sup>Gynecological Centre, Faculty of Medicine, University of Coimbra, Coimbra, Portugal

**Introduction:** Immunosuppression for solid organ transplantation (SOT) decreases the ability to eradicate HPV infection and enables viral replication in infected cells. As a result, transplant recipients have an increased risk of HPV-associated malignancies and anogenital warts.

**Goals:** Evaluate the association of immunosuppression degree and genital HPV lesions after SOT.

**Methods:** Retrospective and comparative analyses of 188 SOT recipients followed in our department between 2013 and 2018. Patients not under immunosuppressive therapy or hysterectomized were excluded. We considered two groups according to the number of immunosuppressants at the first appointment: Group 1 (< 2 immunosuppressive drugs), Group 2 (≥ 2 immunosuppressive drugs). Statistical analysis was performed using IBM SPSS® Statistics v22 (p-value<0.05).

**Results:** There were 26 (13.8%) recipients in group 1 and 162 (86.2%) in group 2. The transplanted organ differed between groups - most of the liver recipients belonged to group 1 (76.9%) and the majority of the kidney (77.2%) and heart (7.4%) recipients were in group 2 (p<0.001). The mean age, nulliparity, premenopausal status and smoking practice were similar in both groups.

The incidence of abnormal cervical smear results seems to be higher in group 2 (11.5% vs. 26.5%,  $p=0.1$ ). All the cases of progression to invasive premalignant lesions ( $n=2$ , 1.2%) and excisions of the transformation zone ( $n=7$ , 4.3%) also occurred in group 2. Positive HPV test was similar in both groups (40.0% vs. 38.6%,  $p=1.0$ ), as also was the high-risk type of HPV identified ( $p=0.5$ ,  $p=1.0$  and  $p=0.7$  for HPV 16, 18 and other high-risk types, respectively) and the persistence of HPV infection (3.8% vs. 4.9%,  $p=1.0$ ). Women in group 2 had more anogenital warts (3.8% vs. 8.6%,  $p=0.7$ ).

**Discussion/Conclusions:** Some SOT recipients require a high number of immunosuppressive therapies to prevent graft rejection, as do those submitted to kidney or heart transplants. Although there were no statistically significant differences between both groups in our study, the results suggest that recipients with  $\geq 2$  immunosuppressive drugs are more prone to genital HPV-associated lesions. These results corroborate the literature that supports an association between the degree of immunosuppression after SOT and the higher probability of HPV-related diseases.

## OC 10

### DEVELOPMENT AND VALIDATION OF A MULTIPLEX-PCR TO DETECT THE PRESENCE OF HOUSE DUST MITES IN VAGINAL SAMPLES

Ana Sofia Oliveira<sup>1</sup>; Carlos Gaspar<sup>1,2</sup>; Joana Rolo<sup>1</sup>; Cristiana Costa Pereira<sup>3,4</sup>; Rita Palmeira-de-Oliveira<sup>1,2,5</sup>; João Paulo Teixeira<sup>3,4</sup>; José Martinez-de-Oliveira<sup>1,6</sup>; Ana Palmeira-de-Oliveira<sup>1,2,6</sup>

<sup>1</sup>Health Sciences Research Centre (CICS-UBI), University of Beira Interior, Covilhã, Portugal; <sup>2</sup>Labfit-Health Products Research and Development Lda, Ubimedical, Covilhã, Portugal; <sup>3</sup>National Institute of Health, Environmental Health Department, Porto, Portugal; <sup>4</sup>EPIUnit - Instituto de Saúde Pública, Universidade do Porto, Porto, Portugal; <sup>5</sup>Center for Neuroscience and Cell Biology, University of Coimbra, Coimbra, Portugal; <sup>6</sup>Faculty of Health Sciences, University of Beira Interior, Covilhã, Portugal

**Introduction:** Hypersensitivity to House Dust Mites (HDM) is one of the most common aller-

gic reactions in people worldwide. Besides their ability to sensitize and induce local inflammatory response in the nasal mucosa, HDM are capable to sensitize other organs and mucosae. Vaginal mucosa is able to respond to allergenic stimuli as other mucosae, and several antigens are known to provoke allergic reactions in the female genital tract. In fact, studies have already related the presence of aeroallergens, including HDM, to a possible etiologic cause for chronic vaginitis.

**Goals:** The aim of this work was to develop and validate a Multiplex PCR technique to detect two prevalent species of HDM, specifically *Dermatophagoides pteronyssinus* (Dp) and *Dermatophagoides farinae* (Df) in high complex samples, in order to apply the method to vaginal samples later on.

**Methods:** New species-specific primers, using rDNA gene cluster as target, were designed and optimized. Characterization of the new method's limit of detection (LOD) was performed in each mite species using, first, water and then vaginal fluid simulant (VFS) to simulate the conditions found in the vaginal milieu. The Multiplex-PCR was also applied to house dust samples with high probability to contain mites. Sequencing of the PCR products was performed in order to elucidate about the method's specificity.

**Results:** The LOD of the Multiplex PCR for Dp and Df was as low as 101 and 103 DNA copies, respectively. When using VFS as diluent the LOD values were slightly different, presenting a LOD of 102 to both HDM species.

The application of the newly developed Multiplex PCR to house dust samples, resulted in the identification of both species with amplicons of the expected sizes. Sequencing results from the PCR products confirmed the method specificity to the target species.

**Discussion/Conclusions:** The newly designed Multiplex PCR technique was able to simultaneously detect both mite species with high spe-

cificity and sensitivity. The differences in LOD values found with VFS may be due to the effect of the ingredients in the mixture with the enzyme's efficacy, since several of them are used as PCR adjuvants. Nevertheless, the method was proven successful in the detection HDM DNA in a vaginal-like environment. This will allow its application to vaginal samples from women with allergy symptomatology to clarify the possible role of HDM in these challenging cases.

## OC 11

### INVESTIGATION OF THE COMPOSITION OF THE MICROBIOME OF RECURRENT VULVOVAGINAL CANDIDIOSIS

Joana Rolo<sup>1</sup>; Carlos Gaspar<sup>1,2</sup>; Luís Vieira<sup>3</sup>; Teresa Gonçalves<sup>4</sup>; Rita Palmeira-de-Oliveira<sup>1,2,4</sup>; José Martinez-de-Oliveira<sup>1</sup>; Ana Palmeira-de-Oliveira<sup>1,2</sup>

<sup>1</sup>Health Sciences Research Centre (CICS-UBI), University of Beira Interior, Covilhã, Portugal; <sup>2</sup>Labfit-Health Products Research and Development Lda, Ubimedical, Covilhã, Portugal; <sup>3</sup>National Institute of Health Ricardo Jorge, Lisbon, Portugal; <sup>4</sup>Center for Neuroscience and Cell Biology, University of Coimbra, Coimbra, Portugal

**Introduction:** Recurrent vulvovaginal candidosis (RVVC) is caused by *Candida* spp., a colonizer of healthy women's vagina. Recurrence is defined by the occurrence of four or more episodes per year, a condition that causes significant discomfort, pain and an overall life quality decrease in affected women. The treatment of these infections is often challenging, and a permanent solution is still unavailable. The transition to an infectious state is thought to occur primarily due to an imbalance of the vaginal microbiota, mainly composed by lactobacilli. Goals: The aim of this work was to study the vaginal microbiome in RVVC clinical cases and compare these with healthy states.

**Methods:** Nineteen vaginal washes have been collected from 9 women (mean 33±12 years) attending the gynecology consultation of a pri-

vate clinic. Of these, 4 women were diagnosed with RVVC, while 2 others had a sporadic VVC infection. The remaining 3 women were healthy. The samples were categorized according with clinical diagnosis at the time of sampling. The distribution of bacterial species, and their prevalence was assessed by next-generation sequencing of the 16S V4 region.

**Results:** All samples obtained from women diagnosed with a sporadic VVC infection had a dominance of *Lactobacillus crispatus*, while women diagnosed with RVVC had samples dominated by *Lactobacillus iners*. *L. iners* was also dominant in samples obtained from one RVVC woman with uncertain diagnosis.

**Discussion/Conclusions:** *L. iners* has been found to be associated with vulvovaginal candidosis, but its role in candidosis is yet unknown. Our study reveals that this *Lactobacillus* species is more associated with persistence of *Candida* spp and recurrence of the candidosis infection, while *L. crispatus* dominates the microbiome in sporadic vulvovaginal infection. Further studies are needed to elucidate the role of these particular *Lactobacillus* species in candidosis.

## OC 12

### A PHASE 2B, DOSE-FINDING STUDY EVALUATING ORAL IBREXAFUNGERP IN MODERATE TO SEVERE ACUTE VULVOVAGINAL CANDIDIASIS (DOVE)

Nkechi Azie; Mihaela Tufa; David Angulo  
SCYNEXIS, Inc., USA

**Introduction:** Vulvovaginal Candidiasis (VVC) affects over 100 million women worldwide (Denning et al, 2018). Currently, the only oral therapy available for the treatment of VVC is fluconazole. Ibrexafungerp (IBX, formerly SCY-078) is a novel IV/oral triterpenoid antifungal agent currently in development for the treatment of invasive and mucocutaneous fungal infections, including VVC. Ibrexafungerp has broad activity against *Candida* spp., including fluconazole-

-resistant strains. Unlike fluconazole and the other topical azoles, ibrexafungerp is fungicidal against *Candida* spp., in vitro.

**Goals:** A phase 2b, dose-finding study was conducted to evaluate the safety and efficacy of oral ibrexafungerp in subjects with moderate to severe vulvovaginal candidiasis (VVC).

**Methods:** Randomized, double-blind, double-dummy study including 5 oral IBX treatment groups (750mg-QD 1 day, 300mg-BID 1 day, 450mg-BID 1 day, 150mg-BID for 3 days, and 300-BID for 3 days) and an active comparator (oral fluconazole [FLU] 150mg single dose). Subjects were evaluated at Day-10 and Day-25 for clinical cure and mycological eradication.

**Results:** 153 subjects with culture-confirmed VVC composed the primary population for analysis (mITT). The IBX dose of 300mg BID for 1 day (600mg-dose) showed the best combination of clinical efficacy and tolerability. At Day-10, clinical cure, defined as complete resolution of all signs and symptoms, was observed in 14 of 27 (52%) subjects in the IBX 600mg-dose arm and 14 of 24 (58%) subjects in the FLU arm. At Day-25, the rate of clinical cure in the IBX 600mg-dose arm reached 70% compared to 50% in the FLU arm. At Day-10 and Day-25, the mycological eradication rates were 63% and 48% for the IBX 600mg-dose arm and 63% and 38% for the FLU arm. The most common AEs were gastrointestinal with mild nausea and diarrhea.

**Discussion/conclusions:** These results support the selection of ibrexafungerp 600mg-dose for Phase 3 registration studies in VVC. Phase 3 studies in both acute and recurrent VVC with ibrexafungerp are ongoing worldwide.

## OC 13

### ELUCIDATING THE ROLE OF *LACTOBACILLUS CRISPATUS* IN CYTOLYTIC VAGINOSIS: FROM PATHOGEN TO TREATMENT

Carlos Gaspar<sup>1,2</sup>; Joana Rolo<sup>1</sup>; Rita Palmeira-de-Oliveira<sup>1,2,3</sup>; Gilbert Donders<sup>4,5</sup>; José Martinez-de-Oliveira<sup>1</sup>; Ana Palmeira-de-Oliveira<sup>1,2</sup>

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**Introduction:** Cytolytic vaginosis (CV) is a vaginal disease that is often misdiagnosed due to its cryptic symptomatology. In a previous study, using next-generation sequencing, we have established that the microbiome of CV patients is dominated by *Lactobacillus crispatus* and that concomitantly, lactate levels are elevated in vaginal washes of these patients. However, pathogenicity of *L. crispatus* in CV is largely unknown.

**Goals:** The aim of this work was to determine the virulence potential of *L. crispatus* isolated from CV patients in comparison with *L. crispatus* isolated from non-CV patients. In addition, antimicrobial activity of sodium bicarbonate, one of the treatments that is mostly prescribed to treat CV was assessed against both sets of stains.

**Methods:** Twenty *L. crispatus* strains have been isolated from women attending the gynaecology consultation of a private clinic. Of these, eight women were diagnosed with CV, while the remaining twelve women had other clinical diagnosis. The isolates were molecular typed to assess intraspecies diversity with RAPD-PCR and ERIC-PCR. Ability to form biofilms in vitro and adhere to HeLa cells (cervical cell line) was performed for all strains. In addition, antimicrobial activity of sodium bicarbonate was performed by the microdilution broth method for all strains.

**Results:** Molecular typing has showed that CV strains are closely related and in general, unrelated with non-CV strains. In addition, CV strains were also in their great majority strongly adherent and able to adhere and invade HeLa cells more rapidly than non-CV strains. Interestingly, we found that CV strains were more susceptible to sodium bicarbonate than non-CV strains.

**Discussion/Conclusions:** We found that a specific subpopulation of *L. crispatus* is involved in CV, possibly related with a higher capacity to form biofilms and invade vaginal cells. The treatment with sodium bicarbonate douches is promising in these cases since we found that pathogenic CV strains are particularly sensitive in vitro to this molecule.

## OC 14

### POSSIBLE ASSOCIATIONS OF THE NOVEL DESCRIBED GARDNERELLA SPECIES AND VIRULENCE PROPERTIES

Nuno Cerca<sup>1</sup>; Joana Castro<sup>1</sup>; Piet Cools<sup>2</sup>; Mario Vaneechoutte<sup>2</sup>

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**Introduction:** Bacterial vaginosis (BV) is the most common vaginal disorder worldwide in women of reproductive age. It is often characterized by the loss of normal vaginal flora, particularly *Lactobacillus* species, and overgrowth of anaerobes such as *Gardnerella*. While it has been previously shown that *Gardnerella* has significant higher virulence than most of the other cultivable BV associated species, it has also been found that many healthy women are colonized by *Gardnerella*. As such, there has been much debate in the literature concerning the contribution of *Gardnerella* to the etiology of BV. Very recently, whole genome sequence analysis

of 81 strains of *Gardnerella vaginalis* revealed that this 'species' is a genus, comprising 13 genomic groups, of which four were described as *G. vaginalis*, *G. leopoldii*, *G. piovii* and *G. swidsinskii*.

**Goals:** Here we hypothesize that the distinct *Gardnerella* species have different virulence potential and that this can explain why some *Gardnerella* are present in healthy women without developing BV.

**Methods:** *Gardnerella* isolates from healthy women and women with BV were identified by MALDI-TOF. All isolates were phenotypically characterized by: (i) determining their initial adhesion and (ii) cytotoxicity to HeLa epithelial cells, (iii) their ability to displace *L. crispatus* previously adhered to HeLa cells and (iv) their ability to form biofilms in sBHI growth media.

**Results:** *G. vaginalis* was the most prevalent species in this pilot study followed by *G. piovii*, *G. leopoldii* and finally *G. swidsinskii*. In the group of isolates with Nugent score  $\geq 7$ , we observed a higher heterogeneity of *Gardnerella* species. Interestingly, *G. piovii* and *G. leopoldii* were able to adhere to HeLa cells in higher concentrations. Furthermore, the ability to displace pre-adhered *L. crispatus* was significantly higher with *G. leopoldii* while *G. swidsinskii* was not able to remove any *L. crispatus*. There was substantial variability in the cytotoxicity score, with *G. leopoldii* being most consistently the more cytotoxic of species tested. Finally, no differences were observed in the species abilities to grow as biofilms.

**Discussion/conclusions:** Overall, *G. leopoldii* presented higher virulent traits, followed by *G. piovii* and then *G. vaginalis*, while *G. swidsinskii* had lower virulence potential. These differences might explain colonization by *Gardnerella* in healthy women. However, these results need to be further validated using a higher number of isolates.

11:30-13:00h | Saturday, November 02<sup>nd</sup>

## SESSION 11 Free communications V

Chairs: Gilbert Donders (BE)

& Ana Palmeira-de-Oliveira (PT)

### Oral communications V

#### OC 15

### ASSOCIATION BETWEEN SEXUALLY TRANSMITTED INFECTIONS AND CERVICAL PRECANCEROUS LESIONS IN SELECTED LATVIAN POPULATION

Plisko O.<sup>1,2</sup>; Zodzika J.<sup>1,2</sup>; Jermakova I.<sup>1,2</sup>; Rezeberga D.<sup>1,2</sup>; Sivina D.<sup>1</sup>; Kunicina D.<sup>1</sup>; Uspelle L.<sup>2</sup>

<sup>1</sup>Riga East Clinical University Hospital, Riga, Latvia;

<sup>2</sup>Riga Stradins University, Riga, Latvia

**Introduction:** Human papillomavirus (HPV) is the commonest sexually transmitted infection (STI) and a necessary cause for development of cervical cancer. However, most of HPV infection cases resolve spontaneously, and only in few women it persists and may result into cervical neoplasia. Factors that may be associated with HPV persistence are still incompletely understood. There are data that different STIs could be among these factors.

**Goal:** To identify associations between sexually transmitted infections and cervical precancerous lesions.

**Methods:** Cross-sectional study was performed in July 2016-June 2017. 110 consecutive patients aged 18 to 50 with abnormal cytology referred for colposcopy to Riga East Clinical University Hospital were included in the study group. 62 women who came for annual gynecological check-up were chosen as controls. Material from cervix and upper vaginal fornix was taken for testing 7 STIs – *Ureaplasma urealyticum*, *Ureaplasma parvum*, *Mycoplasma genitalium*, *Mycoplasma hominis*, *Chlamydia trachomatis*, *Neisseria gonorrhoea* and *Trichomonas vaginalis* using Real Time PCR method. Data analysis was performed with MS Excel 2019.

**Results:** The most frequently detected pathogen

in both groups was *U.parvum* – 37,3% (41/110) in the study group, and 27,4% (17/62) in control group ( $p=0,06$ ). The only bacteria significantly more often diagnosed in women with cervical precancer was *M.hominis* - 10% (11/110) vs. 3% (2/62) in control group ( $p=0,03$ ). *U.urealyticum* and *C.trachomatis* were almost equally found in both groups – 9.1% (10/110) vs. 12.9% (8/62) and 5,5% (6/110) vs. 6,5% (4/62) accordingly. There were by 1 case of *M. genitalium* in each group, no *N.gonorrhoea* cases and 2 *T.vaginalis* infections in the study group.

**Conclusions:** Presence of *Mycoplasma* and *Ureaplasma* infection, especially, *M.hominis* is higher in women with cervical precancerous lesions and may be an important factor in development of cervical disease.

#### OC 16

### THE INFLUENCE OF HIV VIRAL LOAD AND CD4 COUNT ON PAP-SMEAR RESULTS: A PROSPECTIVE COHORT STUDY IN A TERTIARY CENTER

Catarina Palma dos Reis; Filipa Alpendre; Nisa Félix; Ana Massa; Ana Gonçalves

Maternidade Dr. Alfredo da Costa, Centro Hospitalar Universitário Lisboa Central

**Introduction:** Human immunodeficiency virus (HIV) is a known risk factor for Human Papilloma Virus (HPV) cervical infection<sup>1</sup>, premalignant cervical lesions<sup>2</sup> and cervical cancer<sup>3</sup>.

**Goals:** This study was designed to assess if a detectable HIV viral load and low CD4 count are correlated with a greater risk of cellular dysplasia in the pap-smear.

**Methods:** We included 410 women infected with HIV. They were followed in our gynecology HIV clinic from January 2015 to December 2018. Viral load was classified as detectable vs undetectable at the time of the first appointment. All women did a pap smear as part of their annual workup. We used chi-square and t-tests for analyzing any correlation between detectable viral load, CD4 count and pap-smear

abnormalities. Confidence intervals of 95% were reported and a p value < 0.05 was considered significant.

**Results:** The patients' mean age at the first appointment was  $45.7 \pm 11.5$  years. The prevalence of HIV 1 was 95.4% (n= 391), HIV 2 was 3.4% (n= 14) and co-infection with HIV 1 + 2 was 1.2% (n=5).

In the HIV 1 population, viral load was detectable in 19% of cases (n=77). Median CD4 count in the first visit was 626/mm<sup>3</sup> (IQR 403-850).

The prevalence of any abnormality in the pap smear was 15.6% (n= 52). In particular, incidence of ASCUS was 3.6% (n=12); LSIL 9.3% (n=31), HSIL 2.1% (n=7) and ASCH 0.6% (n=2). Women with detectable viral load had a 34.9% risk of showing any abnormality on the pap-smear when compared to the 10.1% risk of women with undetectable viral load (OR= 4.7, CI 2.5-8.9, p<0.01). When analyzing each of the cytological abnormalities, the prevalence of LSIL was superior in women with detectable viral load (OR 4.9, CI 2.3-10.5, p<0.01). Among women with detectable viral load, the risk of being diagnosed with ASCUS, HSIL and ASCH was also superior, but we did not have enough power to reach statistical significance (p values 0.06 to 0.28).

CD4 counts were not correlated with pap-smear results.

**Discussion/Conclusions:** In our cohort, women with detectable viral load are at significantly greater risk of cervical dysplasia, particularly LSIL. CD4 counts, on the other hand, were not predictive of pap-smear abnormalities.

These findings highlight the importance of cervical cancer screening in HIV positive women, and might help to tailor gynecological surveillance according to virologic status.

#### References

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<sup>2</sup> Denslow SA, Rositch AF, Firnhaber C, Ting J, Smith JS. Incidence and progression of cervical lesions in women with HIV: a systematic global review. *Int J STD AIDS* 2014; 25: 163–77

<sup>3</sup> Control CfDa. 1993 revised classification system for HIV infection and expanded surveillance case definition for AIDS among adolescents and adults. *MMWR Recomm Rep* 1992; 41 (Rr-17): 1–19.

## OC 17

### INFLUENCE OF CD4 COUNT ON THE PREVALENCE OF HIGH-RISK HPV INFECTION AND CERVICAL CYTOLOGICAL ABNORMALITIES IN HIV-POSITIVE WOMEN

Hundarova K<sup>1,2</sup>; Antunes D<sup>1,3</sup>; Rolha A<sup>1</sup>; Silva C<sup>1</sup>; Ramos V<sup>1</sup>; Caramelo O<sup>1</sup>; Marques JP<sup>1</sup>; Rebelo T1,2; Andrade C<sup>1</sup>; Águas F<sup>1</sup>

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<sup>2</sup>*Gynecological Centre, Faculty of Medicine, University of Coimbra, Coimbra, Portugal;* <sup>3</sup>*Faculty of Medicine, University of Coimbra, Coimbra, Portugal*

**Introduction:** Women living with Human Immunodeficiency Virus (WLHIV) have a higher prevalence of high risk (HR) human papillomavirus (HPV) infection, which is more persistent and has higher risk and faster progression to cervical cancer mainly in individuals with low CD4 counts. CD4 T-cell count is an important prognostic marker of risk for AIDS-associated clinical events and death.

**Objectives:** To evaluate prevalence of HR-HPV and cervical cytological abnormalities among WLHIV, and to analyse the influence of CD4 T-cell counts.

**Methods:** Retrospective analysis of clinical data of WLHIV followed in our institution between 2013 and 2018.

**Results:** Were identified 253 WLHIV, 27 with a C hepatitis coinfection, 5 with B hepatitis and 1 with simultaneous HIV, B and C hepatitis. The majority (90.5%) was under antiretroviral therapy. The median age at the time of 1st visit was 46 years [IQR: 14,5; 18-80], 64% were premenopausal and 71.1% were parous.

All women were submitted to cervical smear, which was abnormal in 38.3% of cases (n=97): 45 ASCUS; 47 LSIL; and 1 HSIL; 1 ASC-H; 2 AGC and 1 carcinoma.

HR-HPV test was performed in 48.6% (n=123) of patients, its prevalence was 22.1% (n=56); 32.5% (n=40) had other high risk-HPV (OHR-HPV); 1.6% (n=2) had only HPV-18 infection; and 0.8% (n=1) had single HPV-16 infection; 10.6% (n=13) had multiple HPV coinfections: 1 simultaneous HPV-16/18; 7 – HPV-16/OHR; 4 – HPV-18/OHR; and 1 – HPV-16/18/OHR.

Considering univariate analysis, women with HR-HPV infection or cytological abnormalities had a lower mean CD4+ T-cell count (p=0.001). CD4 < 200 cell/μL showed the highest HR-HPV prevalence – 44.9% (p=0.001), and cytological abnormalities – 61.2% (p<0.001). ROC analysis using a cut-off of CD4 of 200cell/μL was associated with nonsignificant results for high risk HPV and cytological abnormalities, with a sensitivity of 60.7% and 69.1%, and a specificity of 11.9% and 12.8%, respectively.

**Conclusions:** Our results confirmed an increased prevalence of abnormalities on cervical cytology (38.3%) and HR-HPV (22.1%) in WLHIV comparing with the prevalence described in the literature for general Portuguese population (6.3% and 19.4%, respectively). Low CD4 count was significantly associated with an increased risk of HR-HPV infection and cytological abnormalities, among WLHIV. However, the cut-off of 200 cell/μL is not specific to stratify high risk group and do not obviate the need to change a screening program.

## OC 18

### PREVALENCE AND VERTICAL TRANSMISSION OF SYPHILIS, HIV, HBV AND HCV IN PARTURIENTS FROM SOUTHERN ANGOLA (LUBANGO)

Dinamene Oliveira<sup>1</sup>; Rita Castro<sup>2</sup>; Maria do Rosário Martins<sup>2</sup>; Ângela Mendes<sup>2</sup>; João Piedade<sup>2</sup>; Filomena Pereira<sup>2</sup>

<sup>1</sup>*Clinica Girassol, Lubango, Angola;* <sup>2</sup>*Global Health and Tropical Medicine, Instituto de Higiene e Medicina Tropical, Universidade Nova de Lisboa, Lisbon, Portugal*

**Introduction:** In Angola, studies about sexually transmitted infections (STI) during pregnancy and its transmission to newborns are scarce. Lubango, capital of Huíla province, is the second most populous city of Angola and Irene Neto Maternity is the provincial reference maternity.

**Goals:** Characterize the prevalence of infections by *Treponema pallidum*, human immunodeficiency virus (HIV), hepatitis B (HBV) and C (HCV) virus in parturients admitted to Irene Neto Maternity and explore its transmission to the newborn.

**Methods:** An observational, cross-sectional and analytical study took place from October 2016 to September 2017. The sample size was 500 parturients. Women in labour were screened for antibodies against *T. pallidum*, HIV1/2 and HCV. Antigen detection was used to detect HBV infections. Newborns from infected mothers were also tested by molecular biology. Additionally, detection of HBV DNA was performed in parturients infected with *T. pallidum* or HIV1/2. The prevalence and respective confidence intervals were estimated at a level of 95%. Rural-urban prevalence differences of studied infections were explored using Chi-square test or the Fisher's Exact test whenever required.

**Results:** In 12% of the parturients (59/500, 11.8%, 95% CI = 9.3-14.9) at least one infection was detected. HBV infection was the most prevalent (43/500, 8.6%), followed by HIV (15/500, 3.0%) and syphilis (5/500, 1.0%). No HCV infection was detected. There is no statistically

significant differences in prevalence of studied infections between rural and urban areas. Among parturients infected with HBV, HIV and T. pallidum only eight (18.6%), five (33.3) and two (40.0%) were diagnosed during prenatal care, respectively. One case of occult hepatitis B was detected in coinfection with HIV1. HBV DNA was detected in 3/41 (7.3%) newborns whose mothers were HBsAg positive. Only one of these three parturients had been aware of her HBV infection, her viral load had not been evaluated and did not received antiviral therapy. T. pallidum or HIV1/2 DNA was not detected in any newborn from infected mothers.

**Discussion/Conclusions:** This study is one of the few reports contributing for the knowledge of some STI epidemiology in Angola. The prevalence of the studied infections is of concern, especially that of HBV. A stronger commitment and further research is need to improve the situation, especially regarding prenatal care efforts to diagnose studied infections and prevent vertical transmission.

## OC 19

### GROUP B STREPTOCOCCAL INFECTION – CLINICAL AND PLACENTAL HISTOLOGY CORRELATION

S. Bernardes da Cunha<sup>1</sup>; P. Ferreira<sup>1</sup>; C. Carneiro<sup>1</sup>; M. Martins<sup>1</sup>; I. Reis<sup>1</sup>; C. Rasteiro<sup>1,2</sup>; T. Teles<sup>1</sup>

<sup>1</sup>*Centro Hospitalar de Entre Douro e Vouga, Santa Maria da Feira, Portugal;* <sup>2</sup>*Faculdade de Ciências da Saúde, Universidade da Beira Interior, Covilhã, Portugal*

**Introduction:** Group B streptococcus (GBS) colonises genital and gastro-intestinal tract (10-30% pregnancies) [1-3]. It remains an important cause of early-onset neonatal sepsis. Peri-partum prophylaxis lead to improved outcomes but also brought concerns on antibiotic resistance. In vitro GBS penicillin resistance was not described.

Intra-amniotic infection has a role in neurodevelopmental disabilities. Histological examination of the placenta is the gold standard for chorioamnionitis diagnosis.

**Goals:** To evaluate pregnant women with positive prenatal GBS culture and its implication in early neonatal infectious sepsis and placental histology results.

**Methods:** Pregnancies with vaginal/rectal positive swab for GBS were selected (2015- 2017). Neonatal admission to neonatal intensive care unit (NICU) was accessed and the histological placental exam reviewed.

**Results:** 798 pregnancies were selected. All samples collected were penicillin sensitive. 126 cases neonates were admitted to NICU, 2,5% (18) with sepsis diagnosis. All 18 made prophylaxis with penicillin. Only one case did not fulfil the prophylactic antibiotic requirements.

Of the 126 admissions, 37 had placental histological exam available, 5 of them with sepsis diagnosis. In 3 cases the histological diagnosis of ascending intrauterine infection was made: stage 3 grade 2 chorioamnionitis (CA) with foetal response (2 cases) and stage 1 grade 1 CA without foetal response (1 case). Intra amniotic infection was also detected in 6 cases without new-born sepsis diagnosis, 4 of them with stage 3 grade 2 CA with foetal response.

**Conclusion:** In our study, penicillin continues to be an adequate agent to GBS infection prophylaxis (in vitro 100% sensibility). Cases of clinical sepsis with histological infection and histological infection without clinical sepsis were described despite SGB in vivo sensibility and adequate penicillin administration. The implicated microorganism was not identified. Bacterial cultural growth in new-born blood samples may have been impaired by antibiotic administration. Other microorganism than SGB could have been implicated, furthermore in vivo sensibility of SGB may be different. Intraamniotic infection confers increased risk of neurodevelopment impairment. Histological response in the placenta can help to understand a possible infection and neonatal implications.

## OC 20

### INTRAPARTUM FEVER AND NEONATAL SEPSIS – THE ROLE OF GROUP B STREPTOCOCCUS COLONIZATION

Inês Reis; Carolina Carneiro; Patricia Ferreira; Matilde Martins; Sara Cunha; Luisa Sousa; Soledade Ferreira

*Centro Hospitalar de Entre Douro e Vouga, Santa Maria da Feira, Portugal*

**Introduction:** Intrapartum fever (IF) has several etiologies, with multiple maternal and neonatal consequences. The prevalence of IF is 1 to 15 women in labor. Neonatal sepsis (NS) is a major cause of neonatal hospitalization. Streptococcus agalactiae (group B streptococcus - GBS) is an important etiological agent and antibiotic prophylaxis is recommended during labor in colonized women. Intramammary infection is the leading infectious cause of IF and its treatment includes broad spectrum antibiotic with coverage for GBS.

**Objectives:** To analyze the influence of maternal GBS colonization on neonatal sepsis in selected cases of intrapartum fever.

**Method:** Retrospective evaluation of cases of intrapartum fever in a hospital with differentiated perinatal support. Data collected through the ObsCare® platform, including patients from January 2016 to August 2019. Statistical analysis was performed with SPSS®.

**Results:** There were 292 reported cases of IF, of which 209 deliveries were dystocic (109 were caesarean section). Maternal age range was 15 to 45 years old. GBS colonization was identified in 44 cases in the genitals swab. Antibiotic prophylaxis was performed according to hospital protocol. There were 23 cases of neonatal sepsis. In these sample no association was found between the presence of GBS colonization, the incidence of neonatal infection and delivery in these sample.

**Conclusion:** This study demonstrates that in the diagnosis of intrapartum fever, the clinical attitude should be independent of GBS colonization.

## POSTERS

17:00-19:00h | Friday – November 01<sup>st</sup>

### SESSION 8 Free communications III

*Chairs:* Gilbert Donders (BE)  
& Ana Palmeira-de-Oliveira (PT)

#### Oral presentation of selected Posters

## PO 02

### CHAGAS DISEASE: PRENATAL SCREENING IN MADEIRA ISLAND

Carlos Silva Macedo; Rita Salgueiro Neto; Ana Calhau; Rita Leiria Gomes; Marta Travessa; Leonor Castro; José Alves; Nancy Faria; Zeferino Pina  
*Hospital Dr. Nélio Mendonça, Funchal, Portugal*

**Introduction:** Chagas disease (CD), caused by the parasite *Trypanosoma cruzi*, is an endemic infection in South American. The disease can be transmitted by vector, the main route of transmission, contaminated food or drinks, blood or mother-to-child transmission. The main manifestations are cardiovascular, intestinal and neurological, causing about 10,000 deaths per year. Treatment at an early stage allows cure to be achieved, so universal prenatal screening is recommended in endemic areas. Given migration flows, the prevalence is increasing in Europe, being considered one of 17 neglected tropical diseases (according to WHO). In non-endemic countries, mother-to-child is the main route of transmission. Portugal has the fourth highest calculated prevalence of the disease in Europe, despite its underdiagnosis rate (99.4%). The migratory pattern observed in Madeira Island, highlighting migrants from Venezuela and Brazil, emphasizes prenatal screening for CD as a necessity.

**Goals:** To conduct a prenatal organized screening in the population at risk, enabling the identification and therapeutic guidance of pregnant women with CD, as well as newborns with congenital infection.

**Methods:** Search for review articles in databases (Medline and Pubmed), with the terms

“Chagas disease”, “Screening” and “Pregnancy”. Also, support was requested to WHO Chagas disease department.

**Results:** A multidisciplinary team was created to establish the screening programme and a tracking algorithm, as well as implement and disseminate it. The screening test is a serological test, applied to all pregnant women from Latin American, pregnant women with parents from Latin American (regardless of their place of birth) and women with long stay in an endemic area (equal to or greater than 6). Given a first positive test, a second confirmatory test will be required. A molecular test is applied to screen the newborn when the mother is infected. Pregnant women with the diagnosis will be referred to a pregnancy high risk consultation and infectious disease consultation. Only 2 months from the start of the screening, all screenings performed were negative (37).

**Discussion/Conclusions:** In adult population, CD treatment has low efficacy and a high side effect rate. So, in non-endemic countries, educational campaigns for health professionals and at-risk populations should be encouraged, as well as the promotion of prenatal screening in these at-risk populations.

### PO 03

#### **IS PRENATAL TOXOPLASMOSIS SCREENING COST EFFECTIVE IN REDUCING FETAL TRANSMISSION OF INFECTION?**

Diana Santos Rocha<sup>1</sup>; Liliانا Fonte<sup>2</sup>

<sup>1</sup>USF Magnólia, Santo António dos Cavaleiros, Portugal; <sup>2</sup>USF Rosinha, Amora, Portugal

Congenital toxoplasmosis is the result of transplacental fetal infection by *Toxoplasma gondii* after primary maternal infection. The severity of the disease depends on the gestational age at transmission. The seroprevalence varies widely across geographical areas. Hygienic and dietary education programs are effective measures to reduce the seroconversion rate. Universal toxoplasmosis screening in pregnancy is a debatable issue.

The aim of this article is to understand if universal toxoplasma screening in pregnancy is a cost effective tool to reduce the incidence of congenital toxoplasmosis.

Search for practice guideline/expert recommendation (PG/ER), review article (RA), research evidence (RE), randomized clinical trials (RCT), systematic reviews/meta-analyses (SR/MA) in PubMed database in August 2019 using the MeSH terms: Prenatal Diagnosis and Toxoplasmosis, in English, Spanish, French and Portuguese, published in the last 10 years. To assess the level of evidence and establish the strength of recommendation, the American Family Physician's Strength of Recommendation Taxonomy (SORT) scale was applied.

72 articles were found, 14 were selected according to inclusion criteria (6 RE, 5 RA, 4 PG/ER). Although most studies shows significant benefit over the implementation of universal prenatal toxoplasmosis screening, there is an heterogeneous methodological quality of the studies. In addition, there are no RCT on the effectiveness of prenatal screening and treatment in reducing fetal transmission of infection or improving neonatal sequelae.

Universal screening in the pregnant population has been controversial, based on several factors: cost-effectiveness, difficulties in interpreting analytical results, misdiagnosis in pregnant women and newborns, failure of the evolutionary study, and it is not still clear if the intervention is cost-effective in areas with a low prevalence of infection. The knowledge of pregnant women serologies and the seroconversion rate is critical to assess the extent of the problem, as the best cost-benefit ratio for the implementation of screening prenatal care refers to a population with a high prevalence of toxoplasma infection. Although most studies attribute a benefic effect on the implementation of universal toxoplasmosis screening, the efficacy has not yet been evaluated in RCT, so available evidence does not

have a strong support to recommend a universal screening in all countries (recommendation strength C).

#### PO 04

### **DAPIVIRINE VAGINAL RING – AN APPROACH TO HIV PRE-EXPOSITION PROPHYLAXIS**

Margarida de Morais; Margarida S. Rocha; Fábio Medeiros

*Centro Hospitalar Universitário Lisboa Norte, Lisboa, Portugal*

**Introduction:** More than half of the 35 million HIV positive people are women.

Pre-exposition prophylaxis (PrEP) has been showing promising results as preventive strategy regarding HIV transmission.

However, little importance has been given to PrEP in women, particularly women on fertile age, that display more susceptibility to HIV sexual transmission. This increased susceptibility is due either to biological, anatomical or even cultural factors.

PrEP's efficacy has been shown in multiple trials, but these have also revealed low adherence to daily or coitally dependent oral formulations or vaginal gels.

The need for other options is evident, preferably those of long duration and that can be controlled by the woman, as the dapivirine vaginal ring.

**Goals:** To perform a scientific literature review on dapivirine vaginal ring as pre-exposure prophylaxis of HIV infection.

**Methods/Results:** Research up until August 2019, with the keywords “dapivirine vaginal ring”, “HIV pre-exposure prophylaxis” and “PrEP”, on PubMed platform. A number of 45 adequated articles have been selected by title and abstract. Those that were related to HIV PrEP in men were excluded.

**Discussion/Conclusions:** In phase III clinical trials, dapivirine vaginal ring reduced the incidence of HIV1 infection in more than half in women aged over 21, with an adherence rate over 70% and with lesser risk of systemic toxicity.

In women between 18 and 21 years old, the adherence was lower and therefore the efficacy decreased. An annual incidence of HIV1 infection of 6% was registered in this group. However, emerging antiretroviral resistance was not found.

The efficacy of this method can be overemphasized by the overestimation of adherence rates of the several studies and real world data is still needed to know the true impact.

Dapivirine vaginal ring is an important preventive strategy and it provides personal control over HIV prevention. The next challenge is to make it cost-effective and there are already several projects on multipurpose prevention technology combining PrEP and contraception delivered through vaginal ring.

#### PO 08

### **RE Vaccination with the Human Papilloma Virus Nonavalent Vaccine – Is there a benefit?**

Margarida S. Rocha; Margarida de Morais

*Centro Hospitalar e Universitário Lisboa Norte, Lisboa, Portugal*

**Introduction:** It is estimated that 90.9% of Human Papilloma Virus infections in Europe are attributable to the nonavalent human papilloma virus vaccine types. It is also estimated that further 20% of cervical cancers may be preventable by this vaccine, as well as 5% more anal cancers, and a further 18%, 14% and 9% reduction on HPV-associated vaginal, vulvar and penile cancers, respectively, beyond tetravalent vaccine.

**Goals:** To review the literature addressing the potential benefit of revaccination with a nonavalent vaccine against human papilloma virus in females who have completed a full immunization course with tetravalent or bivalent vaccines.

**Methods:** A search was conducted, up until August 2019, on PubMed and Cochrane Library databases, with the key terms “nonavalent vaccine”, “Gardasil 9”, “benefit”, “human papilloma virus” in association.

**Results:** Thirteen papers were selected, by title and abstract, as adequate to the aim of this research.

**Discussion/Conclusions:** There is no recommendation for revaccination in females who have completed a course of a human papilloma virus vaccine. The nonavalent vaccine has showed to be immunogenic to all nine Human Papilloma Virus types in young women previously vaccinated with tetravalent vaccine (>98% of subjects seropositive four weeks after the third dose). To revaccination, these women presented lower response to the types 31/33/45/52/58 - not included in their previous course of vaccination – compared to women who were naïve to any of these vaccines (25% to 63% of the geometric mean titers of previous vaccination naïve females). The clinical significance of this is still not known. We have not found data on this matter concerning the bivalent vaccine. Current data did not show serious safety concerns in individuals who were vaccinated with the nonavalent vaccine after a tetravalent vaccine course. The potential benefit of the additional vaccination must be considered for each subject.

## PO 09

### VAGINAL COLONIZATION IN WOMEN ADMITTED FOR THREATENING PRETERM LABOR (PTL) – 5 YEARS RETROSPECTIVE COHORT

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**Introduction:** The main risk factor for PTL is history of PTB (preterm birth), nevertheless the majority of cases occurs in women without previous PTB. Other risk factors were proposed, none of them with evidence strong enough. There are some risk factors established for PTL such as vaginal bleeding, urinary tract infections, periodontal disease and vaginitis.

**Objective:** The aim of this study was to describe

vaginal flora of women admitted in our hospital from 2014 to 2019 and to evaluate the association between vaginal colonization and maternal/neonatal outcomes.

**Methods:** In the period studied, 161 women were admitted with the diagnosis of threatening PTL, the mean gestation age at admission was 31.7 (+2.6) WG and the mean gestation age at birth was 35.3 (+3.4) WG.

The mean birth weight (BW) was 2463 g (+722), only 3 newborns presented Apgar Score <7 at 5' and 17 presented at gas samples an arterial pH less than 7.2

At admission, vaginal discharge swabs were collected in 62.1% of women: for SGB89 (55.3%), Ureoplasm 26 (16.1%), Mycoplasm 26 (16.1%), Chlamydia 23 (14.1%) and general aerobic cultures 37 (23%).

We create a composite neonatal adverse outcome combining low birth weight (<2500g), pH<7.2, Apgar score at 5' < 7 and neonatal death.

**Results:** From the samples collected, 20 (22.5%) were positive for SGB, 9 (34.6%) for Ureoplasm, 0 (0%) for Mycoplasm, 1 (4%) for Chlamydia, 13 (35.1%) for other aerobic microorganisms - Gardnerella Vaginalis (n=7), E Coli (n=3) e Enterococci (n=2).

Comparing women with positive culture (n=26) vs negative culture (n=74): the time-interval between birth and admission for threatening PTL was 4.0 (+3.5) for positive culture group and 4.7 (+3.0) weeks for negative (p=0.364); neonatal adverse event was not significantly different between groups (p=0.265).

**Conclusion:** The most frequent microorganisms in women with threatening PTL were Ureoplasm and SGB. The interval between hospital admission and delivery, and neonatal outcome were not significantly different between women with positive and negative cultures.

## PO 11

### OBSTETRIC OUTCOMES IN WOMEN WITH HEPATITIS C – OVERVIEW OF THE LAST 22 YEARS IN MADEIRA ISLAND

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**Introduction:** Active chronic hepatitis C is associated with an increased incidence of adverse obstetric outcomes. Recently, there has been a change in the epidemiology of this viral infection, increasingly affecting women of childbearing age. However, universal screening in pregnancy/preconception remains a controversial measure, either because of the low prevalence of this infection and the low rate of vertical transmission, as well as the absence of safe therapeutic weapons during pregnancy.

**Goals:** To evaluate the prevalence of hepatitis C virus (HCV) infection in the obstetric population of Madeira Island and its characteristics, namely parity, maternal age, concomitant infections and their respective obstetric outcomes.

**Methods:** Retrospective descriptive study of pregnant women admitted to the Obstetrics Unit of Dr. Nélio Mendonça Hospital (representative of Madeira's obstetric population) with delivery between 1997-2018, who had the diagnosis of hepatitis C virus (HCV) infection - defined by the presence of anti-HCV antibody. Clinical files were consulted in order to collect data on: sociodemographic characteristics, parity, type of delivery and newborn characteristics (weight, percentile and Apgar score at 5 minutes).

**Results:** Of the 52699 deliveries occurring between 1997 and 2018, 51 (0.10%) occurred in pregnant women diagnosed with HCV viral infection. Of the cases presented, 28 (55%) had a history of active or previous drug addiction, namely IV drugs. 71 % of pregnancies were monitored at hospital level. Only one pregnancy had no medical surveillance. The average maternal

age was 29 years, with 94% of the population between 20 and 40 years. About 65% of the population was multiparous. 73% (37/51) of deliveries occurred vaginally. All newborns presented an Apgar score at 5 minutes greater than 7. The average weight of the newborns was 2990 g, and 25% presented a <10th percentile. The prematurity rate was 12% (versus 6% in the general obstetric population). With regard to co-infection, 3 cases (6%) also had HIV infection and 4 cases (8%) had positive VDRL, of which 3 were diagnosed with syphilis.

**Conclusion:** Despite the low prevalence of hepatitis C in the obstetric population of Madeira Island, the timely identification of HCV-positive pregnant women is of special importance, both for early referral to differentiated obstetric care and for follow-up and subsequent treatment in the postpartum period.

## PO 106

### HUMAN LEUKOCYTE ANTIGEN CLASS II ALLELES AND RISK OF CERVICAL PRECANCEROUS LESIONS.

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**Introduction:** Persistent human papillomavirus (HPV) infection is a necessary cause for development of cervical precancerous lesions and cervical cancer, however, only a small percentage of women progress to cervical cancer. Factors that may be associated with progression risk are still incompletely understood. There are some studies that show association of Human Leukocyte Antigen (HLA) genes among the Major Histocompatibility Complex (MHC) and cervical neoplasia.

**Goal:** Aim of the study was to assess an association of HLA-DQA1\*; DQB1\*; DRB1\* allele's

genetic variants between women with cervical precancerous lesions and healthy controls, and to identify both risk and protective HLA alleles patients.

**Methods:** This study included 50 patients with histologically proven cervical intraepithelial neoplasia (CIN) grades I-III and 100 healthy control persons from Latvian population. HLA genotyping was performed by RT-PCR. The significance of differences in individual subtypes between patients and controls was assessed by Mantel-Haenszel test and Fisher exact correction. Odds ratios (OR), and 95% confidence intervals (CI) were computed by standard methods.

**Results:** The frequency of HLA-DRB1\*07:01 (OR 3.69;  $p = 0.034$ ), DQB1\*03:01 (OR 2.64;  $p = 0.001$ ); DQB1\*04:01-2 (OR 3.45;  $p = 0.004$ ) and DQA1\* 05:01 (OR 1.42;  $p = 0.021$ ) were significantly increased in the CIN patients compared with the control groups. The frequency of the alleles DRB1\*13:01 (OR 0.12;  $p = 0.001$ ) and DQB1\*05:01 (OR 0.22;  $p = 0.018$ ); DQA1\* 03:01 (OR 0.27;  $p = 0.011$ ) was smaller in study group patients and significantly higher in the control group.

**Conclusions:** We demonstrated strong association of cervical precancerous lesions with risk and protective HLA Class II alleles that are determined by the HLA-DRB1\*; DQA1\*; DQB1\*.

## PO 107

### CITOMEGALOVIRUS INFECTION IN PREGNANCY: MATERNAL INFECTION TYPE VS ONE-YEAR NEONATAL OUTCOME

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**Introduction:** Citomegalovirus (CMV) infection is the leading cause of congenital infection in developed countries and the most important cause of congenital deafness and cognitive problems in childhood. Antiviral treatment or

passive immunization are not recommended. Knowledge of immune state in preconception is essential for correct diagnosis and classification of infection during pregnancy. Risk of fetal infection, its prognosis and orientation depend on maternal infection type and gestational age (GA) at diagnosis.

**Goals:** We aim to study the neonatal outcome of newborns whose mothers had CMV infection diagnosed during pregnancy. Primary outcome was defined as infection in fetus/newborn and secondary outcomes as congenital deafness/abnormal auditive screening and cognitive impairment after birth.

**Methods:** A descriptive retrospective study was performed with all pregnant women with CMV infection during pregnancy between 2016 and 2018, with prenatal care and delivery in our institution.

**Results:** Between 2016 and 2018, 41 pregnant women followed in our institution had diagnosis of CMV infection during pregnancy, 56% of which in 1st trimester. Before pregnancy, 43,9% ( $n=18$ ) had already been in contact with CMV (reinfection occurring at a mean GA of 12,7 weeks); 34,1% ( $n=14$ ) did not (primary infection occurring at a mean GA of 17,8 weeks); and in 2,2% ( $n=9$ ) immunity state was unknown (suspected infection at a mean GA of 12,6 weeks). An invasive test was done in 6 cases and in 1 amniotic fluid analysis was positive for CMV. In 2 of those cases ultrasound abnormalities were found (polyhydramnios and bilateral mild ventriculomegaly). We had 2 stillbirths. Mean gestational age at delivery was 38,4 weeks  $\pm$  3,68 and vaginal delivery occurred in most of them. Neonatal urine analysis was positive in 5 cases with suspected primary infection, but at 1-year follow-up no auditive abnormalities were found, although 3 of them had cognitive impairment.

**Discussion/Conclusions:** CMV infection incidence in our center is similar to that described in literature. Although CMV prenatal screening

is not widely recommended, our study shows its importance in classification of CMV infection. In fact, in 9 cases classification was not possible because preconception immunity state was unknown. These cases had to be managed as primary infections. All congenital infections were diagnosed in women with primary infection during pregnancy and there were no cases after reinfection.

## PO 108

### ANTIBIOTIC PROPHYLAXIS IN CONTEMPORARY GYNECOLOGY: MORE LIGHT AND FEWER SHADOWS

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**Introduction:** Gynaecologic minor surgical procedures considering the risk of pelvic inflammatory disease are treated as most other clean-contaminated procedures—a single antibiotic in a single dose before procedure (30–60 minutes before incision).

**Material and method:** 604 patients undergoing small gynecological procedures were included in this retrospective study that has been conducted between 01.01.2018. and 01.01.2019. at the Hospital for Gynecology and Obstetrics Dr. Dragisa Misovic. A group of patients were divided in two groups those who received prophylactic antibiotics 24% and those who did not receive antibiotics 76%.

**Results:** The occurrence of infections, as complications after small gynecological interventions, was reported in neither in the group of patients who received prophylactic antibiotics or therapy, nor in the group of patients who did not receive antibiotics.

**Conclusion:** The aim of prophylaxis is primarily to reduce the risk of infection as a possible complication and to avoid the use of antibiotics for therapeutic purposes. According to official recommendations, antibiotic prophylaxis is not

required for small gynecological interventions (curettage, cervical biopsy, insertion and removal of intrauterine contraceptive devices, hysteroscopy and hysterosalpingography), unless there is a risk of a pelvic inflammatory disease. Overuse of antibiotics is associated with unnecessary drug exposure, possible emergence of resistant microorganisms, and increased treatment costs. The threat of antibiotic resistant bacteria is a constant reminder of the importance of rational antibiotic use.

**Key words:** antibiotic prophylaxis, small gynaecological interventions, pelvic inflammatory disease

## PO 109

### MICRORNAs FROM CIRCULATING EXOSOMES ARE DIFFERENTLY EXPRESSED IN PRETERM PREGNANCIES

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**Introduction:** Preterm Labor (PTL) and Preterm Premature Rupture of Membranes (PPROM) lead to severe perinatal morbidity/mortality worldwide. Exosomes act in cell communication and contain microRNAs (miRNAs) that are potential biomarkers for these complications.

**Goal:** To compare the expression, in exosomes from peripheral blood, of miRNAs between term and preterm pregnancies.

**Methods:** Case-control study with women with PTL, PPROM, term pregnancy with and without labor (TL and T) seen at the Botucatu Medical School Hospital, SP. Exosomes were isolated from plasma using Total Exosome Isolation reagent (Invitrogen) and visualized by transmission electron microscopy (TEM). Detection of exosomal protein CD9 by western blot (WB) and Nanoparticle Tracking Analysis (NTA) were performed. Total RNA was extracted using DNA/RNA/Protein Purification kit (Norgen), quantified, then

purified/concentrated using Amicon columns. The expression of over 800 miRNAs was performed by nCounter Human V3 miRNA Assay (NanoString). Clinical and sociodemographic data were compared by t-test and X<sup>2</sup>. miRNA counts were normalized by background threshold using miR-6721 as endogenous control. A comparison of miRNAs expression and relative risk was performed by generalized linear model (Poisson or negative binomial distribution) and adjusted by Wald's correction.

**Results:** Samples from 31 pregnant women – 15 preterm (8 PTL and 7 PPRM) and 16 term (9 T and 8 TL) were included in this study. Mean gestational age was 34w5d ± 2w3d and 39w2d ± 1w for preterm and term groups, respectively. TEM, WB, and NTA confirmed exosome isolation, median size of the particles was 115.5 ± 4.5 nm. Expression of miR-612 was increased in preterm groups compared to term groups [PTL: 187.7 ± 27.4 vs. TL: 155.7 ± 29.9, p=0.003 RR=1.20 (1.06-1.36) and PPRM: 168.7 ± 22.7 vs. T: 135.3 ± 20.5, p<0.001 RR=1.25 (1.09-1.42)]. miR-1253, miR-1283, miR378e and miR-579-3p were down-regulated in PPRM compared to term (T) pregnancies.

**Discussion:** miR-612 has been showed to increase apoptosis in tumor cells and to regulate NF-κB inflammatory pathway, processes involved in PTL/PPROM pathogenesis. miR-1283 is involved in trophoblast proliferation while there is limited data on miR-1253, miR-378e and miR-579-3p.

**Conclusion:** miRNAs from circulating exosomes are differently expressed between term and preterm pregnancies and have the potential to be used as non-invasive biomarkers for pregnancy complications and for therapeutical purposes.

## PO 110

### SERUM INFLAMMATORY MARKERS OF PREGNANT WOMEN IN LABOUR AND PUERPERIUM

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**Introduction:** Inflammatory markers (IFM) are physiologically higher in pregnant woman and reference values defined for non-pregnant population may not be adjusted to the first group

**Goals:** To compare serum IFM of women in labour and puerperium with and without inflammatory/infectious intrapartum complications, evaluating the influence of mode of delivery and temporal progression

**Methods:** Prospective study, with assessment of leucocytes, neutrophils and C reactive protein (CRP) of women in labour and/or on second day of puerperium, admitted in a tertiary centre, from December 2018 to August 2019. The study variables (demographic data, mode of delivery, maternal infectious complications, placenta histology and microbiology) were collected using Obscare® database and analysed by IBM SPSS® software (Mann-Whiney U test and ROC curve)

**Results:** We included 173 pregnant women, 26,6% with infectious complications. Chorioamnionitis (CAM) was the most frequent complication (93,5%, n=43) along with pulmonary infection (n=2) and pyelonephritis (n=1).

When comparing pregnant woman in labour with vs without infectious complications, leucocytes, neutrophils and CRP are statistically significant elevated in the first group, both in labour and puerperium (p<0,05). However, the median of all IFM is elevated comparing with normal cut-offs even without infectious complications. Considering IFM in labour and puerperium as a diagnostic test of infection, ROC curves were

obtained and CRP in labour (0,766) and in puerperium (0,775) had the highest area under the curve. In order to maximize both sensibility and specificity, the cut-off value for CRP in labour was 12,45 mg/L (sensibility 83% and specificity 65%) and in puerperium was 56,2 mg/L (sensibility 83% and specificity 62%).

In particular case of puerperium without labour infectious complications, all IFM are higher 2 days after caesarean delivery compared with vaginal delivery, with statistical significance in case of CRP ( $p < 0,01$ ).

Comparing IFM values in CAM from labour to puerperium, leucocytes decreased from 17,09 to 12,16x10<sup>9</sup>/L and neutrophils decreased from 85,60% to 75,60%, in contrast with CRP that raised from 35,00 to 127,04mg/L.

**Conclusion:** CRP was the more reliable serum IFM for the diagnosis of infectious complications in labour, rising until second day of puerperium. Since all IFM are elevated from reference levels even in pregnant women without infectious complications, new reference values should be established for this population.

## PO 111

### HPV – ARE THE HISTOLOGIC RESULTS OF TRANSFORMATION ZONE LOOP EXCISIONS CONSISTENT WITH OUR EXPECTATIONS?

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**Introduction:** Loop excision of transformation zone (LETZ) is often used to treat HPV+ high risk (HR) lesions. Changes in cytology with HR HPV+(mainly if p16/ki67+), altered colposcopy and detection of high grade lesions (HSIL) in biopsies justify this procedure.

**Goals:** Characterize the population submitted to LETZ including reasons, results and outco-

mes. Methods: Retrospective study of the 119 patients submitted to LETZ in a Gynecology Department of a tertiary hospital during 2 years (2017-2018).

**Results:** Mean age was 40,9±10,9[21-70] years-old, 13,4% (n=13) postmenopausal and 63,9% (n=62) were under oral combined hormonal contraception. HSIL/carcinoma was found in 63,9%(n=76) of LETZ. In LETZ with normal histology result or with low grade lesions (LSIL) (36,1% n=43), a previous biopsy was performed in 30 cases. HSIL was found in 36,7% of those (n=11), justifying LETZ. LSIL or normal epithelium in previous biopsies (n=19) were associated with cytology ≥ ASC-US (n=16) and persistent, HPV HR + (n=16) with + p16/ki67 (n=6). In other cases LETZ were justified by colposcopies with transformation zone type 3 (TZ3C)(n=2), colposcopies with grade 1 lesions (G1C) (n=4), colposcopies with grade 2 lesions (G2C) (n=10). In 13 cases of LETZ there was no info about previous biopsy. These cases had a cytology ≥ ASC-US (n=12) some of them persistent, one with adenocarcinoma in situ (n=1), HPV HR + (n=8), p16/ki67 + (n=3), TZ3C(n=3), G1C (n=2), G2C (n=6), HIV + (n=1). In patients with HSIL in LETZ, follow up cytology in 59 cases revealed: NILM 78,0% (n=46), ≥ ASC-US 22,1% (n=13). HPV test found other HR + 25,4% (n=15) and p16/ki67 + 3,4% (n=2). Thirty four (28,6%) of the 119 patients received nonavalent HPV vaccine after LETZ.

**Discussion/Conclusion:** LETZ was responsible for HSIL/carcinoma in 73,1% (n=87). However, other procedures of LETZ did not confirm the expected high grade lesions. In the future there might be necessary a combination of other markers to highlight the higher risk of HSIL, and support the decision of LETZ.

## PO 07

### CERVICAL DYSPLASIA IN FEMALE SEX WORKERS IN NORTHERN PORTUGAL: AN OBSERVATIONAL STUDY

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**Introduction:** Female sex workers (FSWs) are a high-risk group for Human Papillomavirus (HPV) infections. Most HPV studies in this population describe HPV prevalence, but only a few papers also provide cytological or histological results.

**Goals:** To determine the prevalence of cytological anomalies in Papanicolaou (Pap) test among FSWs, as well as to describe its follow up, in Oporto, Portugal.

**Methods:** This is a retrospective study including SWs who performed a Pap test between May 2016 and May 2019 at our center. These women were referred through a local non-governmental organization. All care provided was free of charge. For women tested on multiple occasions during this period all the screening results were included. A liquid-based ThinPrep® Pap test was performed. Cytological abnormalities revealed were classified according to the Bethesda System. When ASCUS or higher grades of squamous intraepithelial lesion were detected, a subsequent appointment was scheduled. Besides pap smears results, serologic, socioeconomic and obstetric characteristics were also analyzed using SPSS®.  $p < 0,05$  was considered significant.

**Results:** A total of 135 samples were tested from 125 women during the study period. Fifty-eight (46.9%) were between 31 and 40 years old (19-64) at their last screening, and almost half were Brazilian, with only 33 (26.4%) being Portuguese. Being foreign didn't influenced ha-

ving a previous pap test  $\geq 3$  years [11 (27.5%) of the Portuguese versus 26 (27.4%) of the non-Portuguese women;  $p > 0,05$ ]. The prevalence of cytological abnormalities was 9.6%. A total of four ASCUS (two of which HPV 16 positive), eight LSIL and one HSIL was screened. Almost half of the women with cytological anomalies did not attend to the subsequent appointment (six; 46,2%). The seven colposcopies performed on those who kept the follow up revealed four cases of CIN 1, two of CIN 2 and one case of CIN 3. So far three women underwent conization of cervix.

**Discussion/Conclusions:** The prevalence of cytological abnormalities was lower in this study, compared to the previous published literature. It's a fact that targeting FSWs is challenging as they tend to move within and between countries, however our results support that lack of knowledge about HPV and potential health consequences of an abnormal Pap smear plays an important role, making it essential for health care professionals to keep focused on delivering information to these women.

## PO 10

### MATERNAL AND NEONATAL CHICKENPOX IN POSTPARTUM PERIOD: A CASE REPORT

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**Introduction:** During pregnancy, varicella may have serious consequences for the pregnant women and for the fetus or newborn. Chicken pox between the 5th and 24th weeks of pregnancy may lead to the congenital varicella syndrome. In case of maternal varicella during the last few weeks of pregnancy or shortly after delivery, the virus can cause chicken pox in the newborn.

**Goals:** To present a case report of maternal and neonatal chickenpox in postpartum period.

**Case report:** Patient S.D., aged 35, was admitted to our hospital in her second pregnancy. The

pregnancy was controlled on regular base. She gave birth to healthy male newborn. On the first postpartum day mother has developed unspecific generalized rash. She confirmed a history of primary varicella-zoster virus (VZV) infection. According to that data she received antihistamines and corticosteroid therapy. She was discharged third postpartum day in good physical condition with minimal skin changes. Two days later, she presented with typical clinical signs of varicella infectious and viral pneumonia. The diagnosis is laboratory and radiographic confirmed. The newborn received intravenous VZIG immediately in his third day of life, but unfortunately he also developed varicella infectious on his 15th day of life, treated with antiviral drugs for several days in hospital.

**Conclusion:** Life-threatening disseminated neonatal varicella must be expected if the mother develops chicken pox between 5 days before and 2 days after delivery. Using currently available diagnostics, immunoprophylactic and therapeutic opportunities, these serious consequences of varicella during pregnancy can be prevented.

**Key words:** chickenpox, postpartum period, immunoprophylactic, vaccination

## PO 12

### WHAT DO PREGNANT WOMAN KNOW ABOUT SYPHILIS?

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Syphilis is one of the most common sexually transmitted infections. In underdeveloped countries its prevalence decreased sharply with the development of antibiotics in the first half of the 20th century. However, there are specific subgroups which, for multiple reasons (high number of sexual partners, no access to health care, social marginalization) maintain high prevalences.

In 2017, 3189 cases were notified in 28 countries of the European Union, corresponding to an annual notification rate of 7,1 cases per 100000 habitants and 1 case per 100000 habitants in Portugal. The Center for Disease Control's reveals there were 918 cases of Congenital Syphilis in the United States in 2017 - a rise that parallels similar increases in primary and secondary syphilis among women of reproductive age.

Between 2012 and 2015, 1611 cases of syphilis and 36 of congenital syphilis were notified in Portugal, showing an increase. A report from the National Health Institute in 2015 reported that 2,4% of the adult Portuguese residents had antibodies against *Treponema pallidum*.

Syphilis is still the most common congenital infection in the world, with devastating consequences for the mother and baby if not treated early. Screening in the first prenatal visit is recommended in many countries, and is being extended in countries that have compromised to eliminate maternal-fetal HIV and Syphilis transmission.

Congenital syphilis is preventable, and the elimination of maternal-fetal transmission is reachable through education of the population, disclosure of information, implementation of screening programs and effective follow up and treatment strategies.

Although being a common congenital infection, there are no published studies evaluating the knowledge of pregnant women about this disease, of our knowledge.

**Goals:** To understand what our population of pregnant women knows about Syphilis.

**Methods:** Application of a questionnaire about Syphilis to pregnant women who attended an obstetrics appointment in our hospital between September and November of 2019. The questionnaire used was adapted from an existing validated questionnaire. Two questions were changed to adapt it to our target population. A

pilot-test with 10 women was then accomplished to understand the perception and pertinence of the questionnaire in the population

**Results:** The questionnaires are still being implemented at this moment.

### PO 13

#### **MULTIDRUG RESISTANT INFECTION COMPLICATING POSTPARTUM HISTERECTOMY – A SURPRISINGLY OUTCOME**

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**Introduction:** A 40 year-old multiparous healthy postpartum woman (c-section - fetal distress) suffered an uterine atony that led to hysterectomy. After 2 days, a second laparotomy was performed (hemoperitoneum). The hypovolemia caused an acute tubular necrosis and need for hemodialysis. A stool culture revealed *Clostridium difficile*, so vancomycin was initiated. Goals: To describe a case of multiresistant postoperative infection with multiple complications. Methods: Multidisciplinary approach and analysis of a systemic disfunction following a postpartum emergency. Results: At 5th day of antibiotics, she was transferred to our tertiary hospital, undergoing hemodialysis. Due to abdominal distention, cultures of urine, blood and operatory wound exsudate were collected (all negative). A CT-scan showed a pelvic abscess above the vaginal dome and a thrombus in the left external iliac vein. Enoxaparin was added. She had also a vaginal hemato-purulent drainage with dome's and abdominal incision deep dehiscence. Due to inflammatory parameters worsening, we changed to meropenem and metronidazol. Nevertheless, fever restarted and diarrhea con-

tinued so fidaxomicin was added (*C.difficile* resistant to vancomycin). Surgical correction of the abdominal wound with laparotomy, double-sided prosthesis and vacuum dressing were performed. Afterwards, uncontrolled bleeding required epigastric artery embolization, and the wound was left opened with hemostatic compresses. Peritoneal washing was positive for multiresistant *Klebsiella Pneumoniae* (only sensitive to fosfomicin and tigecyclin). After a cutaneous reaction to fosfomicin, we changed to tigecyclin. A new wound exsudate revealed *Pseudomonas aeruginosa*, so colistimethate was added and meropenem restarted. Inflammatory parameters did not improve, fosfomicin was re-initiated together with anti-histaminic. Neurologic signs emerged (tremble, muscle weakness, members incoordination, distal paresthesias, tongue dyskinesia) unresponsive to hypocalcemia and acidosis correction or suspension of metoclopramide. The electromiography suggested a Guillain-Barré syndrome. Due to polypnea, she was transferred to Intensive Care Unit for intubation. Discussion/Conclusions: Uterine atony with hypovolemia is risk factor for infection. This case illustrates one of the worst outcomes of a postpartum complication. A multidisciplinary contribution is essential and we are all working in cooperation for the wellbeing of our patient.

### PO 14

#### **PREGNANCY OUTCOME AFTER ELECTROSURGICAL CERVICAL CONE BIOPSY**

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**Introduction:** Human papillomavirus (HPV) is the most common sexually transmitted infection in adults, with the highest incidence rates occurring in young women of reproductive age. Accu-

mulating evidence suggests that HPV infection is more likely to persist during pregnancy and regress after delivery. Maternal infections, inflammation and changes in vaginal bacterial microbiota have been recognized as an underlying cause of major adverse pregnancy outcomes such as miscarriage spontaneous preterm birth, and pregnancy-related hypertension disorders. Treatment of precancerous lesions involve excisional cervical procedures. These treatments are often performed in reproductive age women and may impact future pregnancy outcome.

**Goals:** To evaluate the pregnancy outcomes in all patients who underwent electrosurgical cone biopsy of the cervix and subsequently became pregnant.

**Methods:** Retrospective study.

Patients who became pregnant between January 2014 and December 2018 after an electrosurgical cone biopsy of the cervix were selected. The collected data included: year and indication for treatment, histological results and HPV status of specimen; time interval between treatment and pregnancy, obstetric history, gestational age at delivery, mode of delivery and neonatal outcome. A group (G2) of pregnant women with no previous surgery of the cervix was used as the control group. Data were analyzed by SPSS.

**Results:** Twenty six women became pregnant after electrosurgical cone biopsy treatment. The mean age was 32,88 years. The interval between treatment and pregnancy was 1,88 years. Ten (43,5%) were primiparous. Carcinoma in situ was the most common indication for cone biopsy (n= 20, 76,9%). High risk HPV was reported in 5 (19,2%). Three patients (12%) had first-trimester miscarriages and one (3,8%) ectopic pregnancy. There was only one preterm delivery (3,8%) at 35 weeks. Most patients (n=2, 60%) had a normal vaginal delivery, 2 (10%) underwent C-section deliveries due to breech presentation. No difference in

gestational ages at delivery was found between groups ((G1: 38,90±1,30 and G2: 38,98±1,45 (p=0,213)). There was an increased risk of preterm labour in G1, but without any statistically significant difference (p=0,133).

**Discussion/Conclusions:** There is evidence that electrosurgical cone biopsy of cervix is associated with increased risk of preterm labour. Despite the sample size of our study, our findings are in accordance with the literature.

## PO 15

### CO-CULTIVATION OF FOUR PROBIOTIC VAGINAL LACTOBACILLUS SPECIES DEMONSTRATES DIFFERENCES REGARDING PROLIFERATIVE AND ACIDIFYING POTENTIAL

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**Introduction:** The healthy vaginal microbiome is dominated by lactic acid and H<sub>2</sub>O<sub>2</sub> producing lactobacilli and the most abundant species are *L. crispatus*, *L. gasseri*, *L. jensenii* and *L. iners*. Disturbances of the vaginal microbiome can lead to vaginal dysbiosis, such as bacterial vaginosis or candidiasis, or even preterm birth. The restoration and support of the vaginal microbiome with probiotics containing the most abundant vaginal lactobacilli, is a common therapeutic approach, however, the interaction between different strains is unknown.

**Goals:** This study investigated the interaction of *L. crispatus* DSM 20584 (Lc), *L. gasseri* DSM 20243 (Lg), *L. jensenii* DSM 20557 (Lj), and *L. iners* DSM 13335 (Li) in co-cultivation experiments regarding their proliferative and acidifying potential.

**Methods:** All species were cultured in MSVF medium at 37°C and 5% CO<sub>2</sub> and experiments were started with equal amounts in the

following combinations: 1) Lg+Lc, 2) Lg+Lj, 3) Lj+Lc, 4) Lj+Lc+Lg, 5) Lj+Lc+Lg+Li. All combinations were set up in triplicates and analyzed every 6 hours over a period of 96 hours. Growth was determined by measuring optical density and acidifying potential by pH measurement. Shifts in the relative abundance of species were determined by sequencing of 16S rRNA gene amplicons.

**Results:** Co-culture experiments with 2 strains (Lg+Lc, Lg+Lj, Lj+Lc) demonstrated that the same optical density of each inoculum did not result in a 50:50 abundance of each strain. Lc was overgrown by Lj and Lg in the first 6 hours, with stable abundance over the remaining time. Initial abundance of Lg+Lj remained unchanged over time. Lc was also overgrown in the 3-species co-culture, whereas the 4-species co-culture (Lj+Lc+Lg+Li) showed a suppression Li and Lc. The proliferative potential of all species in mono-culture correlated with their acidifying potential, with the highest capacity shown by Lg followed by Lc and Lj. Proliferative and acidifying potential was highest and fastest for the combination of Lg+Lc, while it was lowest for the combination Lj+Lc. 2-species combinations were demonstrated to be as effective regarding proliferation and acidification as a 3- or 4-species combinations.

**Conclusion:** The careful combination of different lactobacilli species, especially with *L. crispatus*, in a probiotic is crucial and could impact the success of vaginal microbiome restoration enormously. A 2-species combination could be as effective as a probiotic containing three or four strains.

## PO 16

### SECONDARY SYPHILIS IN A 14-YEAR-OLD ADOLESCENT

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**Introduction:** We report a case of secondary syphilis in a 14-year-old girl, presenting with condylomata lata and typical cutaneous eruption on palms and soles.

**Goals:** This case of secondary syphilis has the interesting aspect of presenting in such a young female. Our patient's lesions, documented by photography, give clinicians the opportunity to embed this classic presentation in their visual memory. This case is also a recall to the rising incidence of syphilis, that must not be overlooked, even in the youngest of patients, so that adequate treatment can prevent complications and ongoing transmission.

**Methods/Results (Case Report):** A 14-year-old caucasian female presented with painless vulvar lesions for one month.

She was sexually active and 2 months earlier she had an abortion. Her past medical history was otherwise unremarkable.

Upon examination, soft, flat-topped, pink-tan papules were noted on vulvar and perianal area, characteristic of condylomata lata. A symmetric, macular, scaling eruption on palms and soles, typical of secondary syphilis, was also found. The patient had no constitutional symptoms.

VDRL testing was positive (1:128) and a positive TPHA was confirmatory. HIV testing was negative.

Treatment with a single intramuscular dose of penicillin (2.4 million units) was provided, with resolution of lesions and a decline in the non-treponemal titer.

**Discussion/Conclusions:** Syphilis is an infection caused by the spirochete *Treponema*

pallidum. The major routes of transmission are sexual and vertical. Untreated, it progresses through 4 stages: primary, secondary, latent and tertiary.

Secondary syphilis develops weeks to a few months after the primary lesion and is characterized by systemic spread of spirochetes. Manifestations include constitutional symptoms, lymphadenopathy, patchy alopecia and rash. The rash may be quite variable and, most often, involves the trunk and extremities, including palms and soles. Condylomata lata are painless, highly infectious, raised papules that appear on vulvar, perianal or any moist intertriginous area. Since the discovery of penicillin, the spread of this once very common disease has been largely controlled, but eradication has been unsuccessful. The trend in syphilis rates has been on the rise in recent years. Although secondary syphilis is uncommon under age 15, it should not be forgotten in the differential diagnosis of vulvar lesions in young adolescents.

## PO 17

### PREVENTION OF HIV VERTICAL TRANSMISSION IN A TERTIARY CARE HOSPITAL OF PORTUGAL – 15 YEARS EXPERIENCE

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**Introduction:** Human immunodeficiency virus (HIV) infection is a worldwide issue, associated with worse obstetric outcomes and premature morbidity.

Introduction of antiretroviral therapy (ART) use during pregnancy reduced the vertical transmission (VT) rate to <2%.

**Goals:** This study aims to describe the practices of prenatal care in reducing HIV VT and to study and characterize the pregnant HIV+ population in a tertiary care Hospital.

**Methods:** We retrospectively reviewed data on all HIV+ pregnant patients followed up between 2004 and 2018 in our hospital and analyze multiple variables including prematurity, low birth weight (LBW) and HIV vertical transmission.

**Results:** A total of 86 women (85 with HIV1 and one woman infected with HIV2) were enrolled in the study, corresponding to 106 newborns (98 single gestation, 4 twin gestations).

Co infection was verified in 16 cases (18,6%). The most frequent HIV transmission was heterosexual contact (65%).

HIV infection was diagnosed previous to pregnancy in 64 gestations (62,7%), during pregnancy in 35 (34,3%) and during labor/delivery in 3 cases (2,9%).

ART was initiated in preconception in 41 gestations (40,2%), during pregnancy in 58 (56,9%) and in the postpartum period in 3 cases (2,9%). Median gestational age at birth was 38 weeks, with 14.7% prematurity documented. We recorded statistically significant differences between rates of prematurity in mothers who smoked (RR 3.7, p=0.04), consumed alcohol (RR 10.5, p=0.03) or drugs (RR 3.7, p=0.04) during pregnancy. LBW was identified in 21,5% of births. Viral load, maternal ART and co-infections were not associated with increased risk of prematurity or LBW.

VT occurred in one case, with no prenatal vigilance, accounting for an overall VT rate of 0,9%.

**Conclusions:** An adequate prenatal and perinatal care can reduce HIV VT rate. In our study, adverse outcomes seemed to be related with an unfavorable social environment rather than with the use of ART in pregnancy. This findings highlights the importance of a close clinical and psychological follow-up of HIV infected mothers in order to prevent not only HIV vertical transmission but also other undesirable events like prematurity or LBW.

Our VT rate (0,9%) was inferior to the Portuguese rate registered during this period.

HIV screening infection is fundamental in pregnant population, as adherence to ART during pregnancy for reducing the VT rate and complications.

## PO 18

### THE VAGINAL MICROBIOME OF REPRODUCTIVE AGE WOMEN AS AN INDICATOR OF CERVICAL HUMAN PAPILLOMAVIRUS INFECTION

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**Background:** The association between the vaginal microbiome and human papillomavirus (HPV) remains unclear, partly due to heterogeneous feature of the microbiota across population. We aimed to evaluate the association between microbiome components and cervical high-risk HPV (hrHPV) infection.

**Methods:** We enrolled 546 women aged 18-51 years in a cross-sectional study in five Brazilian

regions. We genotyped cervicovaginal samples for HPV using Roche's Linear Array test. For vaginal microbiome analysis, we sequenced V3-V4 of 16S rRNA gene (Illumina). We used stepwise (forward,  $p < 0.15$ ) logistic regression to construct two linear scores to predict hrHPV positivity: one based exclusively on the presence of individual bacterial taxa (microbiome-based [MB] score) and the other exclusively on participants' sociodemographic, behavioral and clinical (SBC) characteristics. The MB score combined coefficients of 30 (out of 116) species retained in the model. The SBC score retained six (age, marital status, new sex partner, hormonal contraceptive use, body mass index and smoking) out of 25 candidate variables. We constructed receiver operating characteristic (ROC) curves for the scores as hrHPV correlates and compared the areas under the curve (AUC) and 95% confidence intervals (CI) to infer the difference in predictive performance.

**Results:** Prevalence of hrHPV was 15.8% ( $n=86$ ), while 143 (26.2%) participants had Lactobacillus-depleted vaginal microbiome. The AUCs were 0.8022 (CI: 0.7517-0.8527) for the MB score and 0.7027 (CI: 0.6419-0.7636) for the SBC score ( $P=0.0163$  for the difference between AUCs).

**Conclusions:** Our findings suggest that the composition of the vaginal microbiome is strongly correlated with hrHPV positivity, warranting further validation of its clinical utility via longitudinal studies.

## PO 19

### INFLUENCE OF SINGLE NUCLEOTIDE POLYMORPHISMS (SNPs) IN IMMUNOREGULATORY GENES IN THE MORBIDITY OF PRETERM NEWBORNS.

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**Background:** Prematurity is the main cause of perinatal and neonatal morbidity and mortality worldwide. Single nucleotide polymorphisms (SNPs) have been associated with the pathogenesis of morbidities in preterm neonates. We aimed to investigate the association between SNPs in regulatory genes of innate immune response IL1B, IL6, IL6R, IL10, TNFA, TNFR1I, TLR2 and TLR4 and neonatal/infant morbidities in preterm newborns.

**Methods:** Oral swabs were collected from 272 newborns (91 preterm and 181 at term) seen at Botucatu Medical School, UNESP, between 2003 and 2014 and SNPs were identified using Taqman® Genotyping Assays. Medical records were examined to obtain data regarding neonatal/infant morbidity. Stepwise binomial logistic regression models were used to explain the morbidities.

**Results:** Minor neonatal morbidity was influenced by the clinical parameters of maternal age and newborn weight at birth and by the presence of the allele IL6R2 C (rs2228145) while major neonatal morbidity was only influenced by gestational age. Minor infant morbidity was associated with the allele TLR2 T (rs4696480) and major infant morbidity was associated with gestational age and presence of IL6R2 C.

**Conclusion:** The presence of SNPs that exacerbate the inflammatory response increases the susceptibility to neonatal and infant morbidity.

## PO 20

### SEXUAL TRANSMITTED DISEASE AND CO-INFECTIONS IN PREGNANCY

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**Introduction:** Infection during pregnancy can be acquired before or after the conception and cause adverse maternal and fetal outcomes.

All infectious agent has the potential to compromise the maternal health and negatively influence the development of the fetus and so, correct diagnose and treatment is important.

On the other hand, the drugs used can also be harmful to fetal health and the risk/benefits of each treatment plan have to be balanced.

**Goals:** Review of screening, diagnosis and treatment of Syphilis and tuberculosis infections in pregnancy, based on a case report.

**Methods:** Consultations of the clinical file

**Results:** 25 years women diagnoses with ganglionar and pulmonary tuberculosis (TB) was sent to our emergency room due to a positive pregnancy test. During this observation, the ultrasound showed a 15 week fetus, analytic screening was requested and the pregnant was orientated to an infection disease obstetric appointment in order to continue the TB treatment and pregnancy vigilance.

On the first appointment, a positive VDRL was found and primary syphilis infection was confirmed. In collaboration with infectiology it was decided to keep her anti-tuberculostatic treatment with riphampicin, isoniazid and pyridoxine and initiated penicillin, as it represent the first line of syphilis treatment.

From the maternal point of view, pneumologic symptoms and VDRL values were monitored during the rest of the pregnancy with no more intercurrance. As for the fetus, morphologic and seriated third trimester ultrasounds did not present any morphologic or growth abnormally.

A spontaneous term labor culminated with a

heathy newborn with no morphologic or other abnormalities in the neonatal exam.

**Discussion/Conclusions:** Pregnant women can present with more than one infection and all should be diagnoses and treated adequately. Active tuberculosis in pregnancy is associated with adverse outcomes that represents greater hazard to the mother and fetus than the anti-tuberculous therapy.

In this case, the patient presents not only a TB, but also syphilis. All pregnant women should be screening with for this infection not only in first pregnancy appointment, but also during the second and third trimester, as the frequency of vertical transmission increases with increasing gestational age. Adequate treatment is essential to reduce the possibility of fetal infection, but despite the treatment, these neonates should always be evaluated for congenital syphilis after delivery.

## PO 22

### **PREGNANCY OUTCOMES AMONG HIV-INFECTED WOMEN: 7-YEAR RETROSPECTIVE STUDY IN A LEVEL II PERINATAL CENTER**

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**Introduction:** HIV infection in pregnancy is associated with adverse maternal and newborn outcomes. It is of utmost importance to know the clinical and socio-demographic profile of these pregnant women, in order to attain optimum level of HIV-infection control.

**Goals:** Descriptive analysis of sociodemographic characteristics, clinical and pregnancy outcomes of all HIV-infected pregnant women, who had their pregnancy surveillance and termination in a Portuguese Level II Perinatal Center.

**Methods:** Retrospective descriptive study of all HIV-infected pregnant women between 1.01.2012 and 31.12.2018.

**Results:** Of the 16,884 deliveries in CHTS 10

occurred in HIV-infected women, resulting in an incidence of 5.9/10,000 births. Most women were Caucasian (90%) and had  $\geq 2$  childbirths (70%). Mean maternal age was 28 years (IQR 22-38). 60% had  $\leq 12$  years of elementary education; tobacco smoking was reported by 20% and one patient reported illicit drugs consumption. 80% were in a stable relationship and HIV-1 infection was sexually transmitted in 70%. Six had an inaugural diagnosis during pregnancy, one met the criteria for AIDS. Among those with inaugural diagnosis, 50% started treatment in the 1st trimester. Protease or integrase inhibitor combined ART regimens were offered to all women; one refused treatment. The average baseline viral load was 34,913 (IQR 20-165,536) copies/ml and CD4 lymphocytes count was 1487 (IQR 372-8046) cells/mm<sup>3</sup>. Average viral load prior to delivery was 4148 (IQR 20-30,500) copies/ml and CD4 count was 1019 (IQR 376-8046) cells/mm<sup>3</sup>. Elective c-section was the most common mode of delivery (70%) and the most frequent indication was related to HIV infection. In this subgroup, the average viral load was 5712 copies/ml. All HIV-infected women received IV zidovudine peripartum. Apgar score of  $< 7$  in the fifth minute occurred in 10% and there was no perinatal mortality. Average birth weight was 3120g (IQR 2620-4120). Newborn postnatal prophylaxis with zidovudine was initiated when indicated and breastfeeding was suppressed in all cases. No perinatal HIV transmission was recorded.

**Discussion;** Despite the small number of pregnancies reported, this study enhances the importance of HIV testing as part of routine prenatal care, as 60% of women were newly diagnosed during pregnancy. Vertical transmission is currently a rare occurrence due to the widespread implementation of routine antenatal screening for HIV and antiretroviral therapy.

## PO 23

### HBeAg POSITIVE CHRONIC HBV INFECTION IN PREGNANCY – TWO CLINICAL CASES

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**Introduction:** Viral hepatitis are the main cause of liver dysfunction during pregnancy, complicating about 0.2% of all pregnancies. Vertical hepatitis B virus (HBV) transmission is one of its main ways of spreading. The most important risk factors for vertical transmission are HBeAg positivity and maternal viral load (HBV- DNA). The importance of this vertical path is greater in countries of lower endemicity, like Portugal, where most of the infected are HBeAg negative and present low levels of HBV-DNA.

**Goals/methods:** Clinical records of two pregnant women of Asian origin were analysed, in which HBeAg positivity and high HBV DNA levels were detected during pregnancy, followed at the Pedro Hispano Hospital (PHH) Obstetrics Service.

**Results:** Case 1(2011): C.W., 29 years old, Chinese nationality. Followed for chronic HBV infection since the first trimester of pregnancy. The blood tests showed HBeAg positivity and viral load of 20700000 IU/mL. Pregnancy underwent without complications. In 2011 it was not indicated to treat hepatitis B infection during pregnancy. At 39 weeks, the viral load increased to 23399992 IU/mL. She underwent cesarean section at 40 weeks for prophylaxis of vertical transmission in patient with high viral load. The new-born received HBV immunoglobulin and HBV vaccine during the first hours of life and remained seronegative for the infection during follow-up. Case 2 (2016): C.H., 27 years old, Chinese nationality. She was unaware of chronic HBV infection until the third trimester of pregnancy. She was HBeAg positive and had a viral load of 536876159 IU/mL at 39 weeks. By indication of the infectious diseases department

she promptly initiated treatment for the infection. She immediately presented a sharp drop in viral load to 87135815 IU/mL. The patient underwent elective cesarean section for prophylaxis of vertical transmission in patient with high viral load, at 39 weeks and 4 days. The new-born had HBV immunoglobulin and HBV vaccine during the first hours of life, and remained seronegative for the infection during follow-up.

**Conclusion:** Two special situations in the clinical practice of this hospital were described, in which, although controversial, a multidisciplinary decision was made to perform elective cesarean section due to high viral load in an attempt to reduce the risk of vertical transmission with good maternal and neonatal outcomes, in which is also highlighted the importance of timely neonatal prophylaxis.

## PO 24

### ANTIMICROBIAL ACTIVITY OF THYMBRA CAPITATA AND ITS MAJOR COMPONENTS AGAINST GARDNERELLA SPP

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**Introduction:** Bacterial vaginosis (BV) is a common vaginal disorder that affects women in reproductive age. This condition is characterized by a shift in the vaginal microflora from the dominant beneficial *Lactobacillus* to an overgrowth of strictly and anaerobic bacteria. It is noteworthy that BV involves the presence of multispecies biofilm, mainly composed by *Gardnerella* spp.. A major issue related to BV is the recurrent failure of conventionally antibiotic therapies. Therefore, essential oils (EOs) have been considered as a possible treatment option. *Thymbra capitata* EO has already demonstrated a good potential to eradicate bacteria.

**Goals:** The aim of this work was to assess the antimicrobial activity of EOs from *T. capitata* and their main components against *Gardnerella* isolates.

**Methods:** Two EOs and five commercial compounds were used. The minimal inhibitory concentration (MIC) and minimal lethal concentration (MLC) were determined against *Gardnerella* isolates. Synergistic effects between the components were evaluated by the checkerboard method. Also, EOs, the compounds and some combinations, were tested on a *Gardnerella* biofilm.

**Results:** EOs showed different antimicrobial activities with values of MIC and MLC ranging from 0.04 to 0.08  $\mu\text{L}/\text{mL}$  and from 0.08 to 0.16  $\mu\text{L}/\text{mL}$ , respectively. Carvacrol, which is the major component of the EO, had the best antimicrobial activity against all *Gardnerella* isolates, whereas *p*-cymene appeared to have the lowest activity. Regarding the interactions in planktonic cultures, the combination of carvacrol and *p*-cymene had the best interaction, resulting in a synergistic effect, followed by the combination between  $\alpha$ -terpinene and *p*-cymene that resulted in a synergism/ partial synergism. On biofilm, the compounds showed distinct effects, being linalool the component with the highest percentage of biofilm biomass reduction, while  $\alpha$ -terpinene and  $\gamma$ -terpinene did not show any effect. EOs resulted in small percentages of biofilm biomass reduction. However, a combination of compounds between carvacrol, linalool and *p*-cymene seemed to have a better effect than the compounds individually and the EOs.

**Discussion/conclusions:** We concluded that the components from *T. capitata* showed potential antimicrobial activity against *Gardnerella* spp.. Importantly, specific combinations of compounds showed better effects against planktonic cells and biofilms due to synergistic interactions that can result in better antimicrobial activity.

## PO 25

### 20 YEARS OF HIV IN PREGNANCY – COMPARING DIAGNOSTIC TIMINGS

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**Introduction:** The prevalence of Human Immunodeficiency Virus (HIV) infection in Portugal is higher than in the rest of European Union, however it has been decreasing in the last 20 years. According to the Institute Ricardo Jorge's report, in 2017 was registered a rate of 10.4 new cases/105 inhabitants. Routine screening during pregnancy promotes the early diagnosis and treatment, which is determinant for the decreasing mother-to-child transmission rate.

**Objective:** To evaluate the management, virological parameters and vertical transmission in HIV positive pregnant woman whose diagnosis was made before or during pregnancy.

**Methods:** Retrospective study of pregnant women with HIV infection diagnosed previously (group 1 – G1) or during (group 2 – G2) pregnancy, which vigilance or labor occurred in our institution in the last 20 years.

**Results:** There have been identified 130 pregnancies where screening for HIV infection was positive, with the correspondent prevalence of 6,5 cases per year. The median age was 30,0 [17-44] years, 24% nulliparous, 81,5% of them were Portuguese and 55,1% were unemployed. The rout of transmission was sexual in 68,5% of cases.

The diagnosis of HIV infection was made before pregnancy in 77 women and during pregnancy in 44 (40,8%). 30% of the group 1 was already under antiretroviral therapy. In the 1st appointment there was no statistical differences between viral load mean values (G1 23772 VS G2 31302,  $p=0.118$ ), however in G1 14% had

undetectable viral loads. G1 started vigilance earlier (17 VS 19 weeks,  $p=0.118$ ) nevertheless the mean number of appointments was similar (6). During labor 85.1% in G1 and 86.3% in G2 had viral loads under 1000, with 58.1% and 50.0% undetectable loads respectively. Two cases of vertical transmission were diagnosed, 1 from each group.

**Conclusions:** We verified with this study that an important part of HIV infection is made during pregnancy, proving the utility of routine screening. Although the previous diagnosis it is noticeable that pregnancy programming is not a rule in this population, since high viral loads were found in this group. We have noticed that the rate of woman that end up the pregnancy under 1000 copies was high and similar between groups. The success of the pregnancy and the low mother-to-child transmission rates are due to a close cooperation between departments, in a particularly challenging population.

## PO 26

### SEVERE TUBO-OVARIAN ABSCESS AFTER AN UNEVENTFUL VAGINAL DELIVERY – A CASE REPORT

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**Introduction:** Tubo-ovarian abscess (TOA) is a collection of pus involving the ovary and fallopian tube and most often arises as a consequence of pelvic inflammatory disease (PID). The post-partum period appears to be the least likely time to develop a TOA because ascending infection, which is the major pathophysiology in developing PIDs, rarely occurs during this phase.

**Goals/Methods:** Case report of a puerpera followed in our hospital, which presented with a severe TOA. The clinical presentation, orientation and follow-up are presented below.

**Results:** A 28-year-old puerpera (gravid 2, para

2) was admitted to our center 9 days after an uneventful vaginal delivery. She complained of fever and lower abdominal pain, beginning 3 days before. On examination, she was febrile (39,7°C), hypotensive and tachycardic, presenting maximal tenderness in the left iliac fossa with guarding. Purulent vaginal discharge on speculum examination. Blood tests demonstrated elevated leucocyte count (29.220/ml), C-reactive protein (441mg/L), hyperlactacidemia and renal dysfunction. Abdominopelvic ultrasound showed a left adnexal mass with 51mm major diameter and a 46mm hypoechoic lesion in the Douglas' pouch. She was given intravenous antibiotics (clindamycin, gentamicin and metronidazole) and underwent an exploratory laparotomy with drainage of pelvic abscesses. Intraoperative findings included a purulent peritonitis and a large abscess arising from the left adnexal area. After the surgery, she was initially admitted to intermediate care unit, where she stayed 2 days for stabilization. Endocervical exudates identified *Gardnerella vaginalis* and *Mycoplasma hominis*. Pus culture showed penicillin-susceptible *Streptococcus pyogenes* (group A). After therapeutic adjustment, she maintained clindamycin, gentamicin and started penicillin. The patient had an uneventful recovery and was discharged after 5 days, with indication to maintain intravenous therapy in ambulatory until completing 14 days. No complications were found in the postoperative period and she was clinically well on her follow-up visit.

**Conclusion:** Symptoms of PID in pregnancy are extremely variable and accurate diagnosis is difficult because physical findings are confounded by common complaints of pregnancy, predisposing us to missed diagnosis. Although this is a rare finding in pregnancy and postpartum period, we have to be aware of its existence in order to prevent fatal complications.

## PO 27

### WHAT DO WOMEN KNOW ABOUT THE PREVENTION AND CONSEQUENCES OF CONGENITAL CYTOMEGALOVIRUS INFECTION?

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**Introduction:** Cytomegalovirus (CMV) is the leading congenital viral infection and an important cause of birth defects and developmental disabilities, including sensorineural hearing loss. Preventive measures may lead to an 85% decrease in maternal seroconversion. Despite this, some studies, mostly in non-european countries, report that pregnant women have a limited knowledge on the prevention and consequences of congenital CMV infection in pregnancy. There are no data available on this subject involving Portuguese women.

**Goals:** To assess pregnant women's knowledge on preventive measures and consequences of congenital CMV infection.

**Methods:** A written questionnaire was handed to all pregnant women before they attended their first antenatal appointment at a third-level public hospital in Portugal, from April to July 2019.

**Results:** A total of 127 women were approached and all of them answered the questionnaire. The mean age was 31 years (15-44), mean gestational age was 27 weeks (6-40) and 55.2% of women were multiparous. Overall, 72.4% of women had never heard of CMV and 76.6% were unaware that CMV infection could affect the fetus. Regarding prevention, 53.5% of women did not know of any measure for preventing CMV infection and 33.9% did not respond to the question. Of those who answered, only 7 women (5.5%) identified all the appropriate preventive behaviours. The number of correct answers was not related to the level of education (high level versus low level,  $p=0.514$ )

or to parity (nulliparous versus multiparous,  $p=0.242$ ). Most women (69%) did not know an infected woman could breastfeed.

**Discussion/Conclusions:** To our knowledge, this is the first study to evaluate pregnant women's knowledge on the prevention and consequences of congenital CMV infection in Portugal. The results of our study show that Portuguese pregnant women lack information on this subject. Effective educational programs on this subject need to be considered, as primary prevention is the most effective intervention to reduce congenital CMV.

## PO 28

### WHAT DO WOMEN KNOW ABOUT THE PREVENTION AND CONSEQUENCES OF TOXOPLASMOSIS INFECTION IN PREGNANCY?

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*Centro Hospitalar Universitário Lisboa Norte, Lisboa, Portugal*

**Introduction:** Maternal infection with *Toxoplasma gondii* (*T. gondii*) is a rare but severe complication of pregnancy that may result in abortion, fetal malformations and severe visual and neurological sequelae in newborns. The incidence of congenital infection varies from 0.5 to 1.5 per 1,000 live births. The current seroprevalence in Portugal is of 18%, indicating that most women are susceptible to the infection. Some studies report that women have a limited knowledge on the prevention and consequences of congenital *T. gondii* infection in pregnancy. There are no data available on this subject involving Portuguese women.

**Goals:** To assess pregnant women's knowledge about the prevention and consequences of toxoplasmosis infection in pregnancy.

**Methods:** A written questionnaire was handed to all pregnant women before they attended their first antenatal appointment at a third-level public hospital in Portugal, from April to July 2019.

**Results:** A total of 127 women were approached and all of them answered the questionnaire. The mean age was 31 years (15-44), mean gestational age was 27 weeks (6-40), and 55.2% of women were multiparous. Overall, 82.7% of women had heard of toxoplasmosis from sources that included healthcare professionals, friends, family and social media. The vast majority (72.6%) knew that toxoplasmosis could affect the fetus, but only 39.3% knew it can cause abortion. Regarding prevention, only 32.3% of women could identify all the eight appropriate preventive behaviours. Preventive behaviours unrelated to *T. gondii* infection were identified by 68.1% of women, the most common ones being “not consuming raw eggs”, “not consuming unpasteurized dairy products” and “not consuming seafood”. The mean number of appropriate preventive behaviours identified was 5. The number of correct answers was higher among women with a higher level of education ( $p < 0.05$ ) but there was no relation between correct answers and parity (nulliparous versus multiparous,  $p = 0.405$ ). Most women (63%) did not know an infected woman could breastfeed.

**Discussion/Conclusions:** Although toxoplasmosis universal prenatal screening is performed in Portugal, there is a lack of comprehensive knowledge about this topic, namely in what preventive measures are concerned. This fact should alert health professionals of the need of transmitting adequate information to all women on such a relevant topic.

## PO 29

### INFLUENZA A VIRAL INFECTION WITH BACTERIAL SUPERINFECTION IN PREGNANCY

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**Introduction:** Influenza virus is a RNA virus and the transmission is mainly air-borne. It is classified in four distinct genera, influenza A, B, C, and D, depending on antibody responses to glycoproteins. Pregnant women have an increased risk of hospital admission with influenza compared with non-pregnant women. Physiologic and immunologic changes occurring during pregnancy can influence the immunological response of a pregnant woman and result in a pathological condition. Moreover, antenatal influenza infection increases the risk of adverse birth outcomes.

**Case report:** We report a case of a 22-year-old pregnant woman, at 24 weeks of gestation, who came to obstetric urgency with symptoms of productive cough, headache, sore throat and nasal obstruction with two days of evolution. In the objective examination, she presented fever (tympanic temperature 38°C). On the pulmonary auscultation showed a fine crackle on the upper third of the right lung but no dyspnea or other alterations. We performed blood sample tests, nasal exudate, chest x-ray and she was hospitalized with diagnosis of influenza A with a bacterial superinfection. The virus subtype H3N2 was isolated from the nasal exudate. During the hospitalization, she started Oseltamivir (75 mg orally, 2x per day, 5 days) prophylactically and antibiotherapy with amoxicillin + clavulanic acid 1200mg 8/8h during 14 days. There was a clinical improvement and the patient remained without obstetric complaints. Pregnancy was followed up in our department. She had a c-section at 39 weeks, with a female newborn,

3100 kg, and Apgar score of 10/10/10 in 1 min, 5 min and 10 min, respectively.

**Conclusion:** Influenza A virus infection is difficult to diagnose because it presents symptoms similar to those of the common cold but they are more severe, last longer, and can be potentially life-threatening. Therefore, early recognition and awareness of the common symptoms of the flu is important for timely treatment and a multidisciplinary support is crucial to achieve the best maternal and fetal outcomes. Thus, it is highly recommended to prioritize pregnant women for influenza vaccination during any stage of pregnancy.

### PO 30

#### **RISK FACTORS FOR POSTCESAREAN MATERNAL INFECTION AND SURGICAL REINTERVENTION**

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Cesarean delivery is the most important risk factor for puerperal maternal infection. As any surgical procedure, can be associated with wound infection and necrotizing fasciitis, as well as endometritis along with higher maternal morbidity and mortality. Many risk factors have been identified such as maternal related factors (older or younger age, tobacco use, limited prenatal care, recurrent pregnancy loss, obesity, pregestational diabetes corticosteroid use, nulliparity, previous cesarean delivery) and pregnancy related factors (gestational diabetes, premature rupture of membranes, twin gestation, epidural use and emergency delivery). Retrospective, descriptive and observational study in which we analysed medical records from women requiring surgical reintervention after a cesarean delivery, due to puerperal infection. We assessed risk factors for postcesarean infection and surgical reintervention among women who have undergone a cesarean

section from 2013 and 2018 in Centro Hospitalar do Baixo Vouga.

In the study period 2663 cesarian sections were performed, in which 0,41% (11 cases) needed a surgical reintervention. Among the group who underwent surgical reintervention, 8 had surgical site infection (with 2 cases of aponevrosis wound dehiscence), 2 had abdominal wall abscess and 1 case of wound hematoma and seroma. Regarding risk factors for post cesarean infection we emphasize that nulliparity, overweight and obesity, epidural use and urgent cesarean delivery were present in about half the cases of postcesarean infection.

Given that cesarean delivery is one of the most commonly performed surgeries and surgical site infection a frequent complication, identifying risk factors for postcesarean maternal infection and surgical reintervention is crucial for the development of new preventive measures for cesarean-associated puerperal infection, reducing maternal morbidity and mortality.

### PO 31

#### **SEASONAL FLU – A SEVERE CASE IN PREGNANCY**

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**Introduction:** During pregnancy, seasonal flu can pose a serious threat to maternal and fetal health. In the 2009 H1N1 pandemic, pregnant women had a more severe clinical course and higher mortality compared to non-pregnant women. Annual vaccination of pregnant women against seasonal influenza is currently advised by “Direção Geral de Saúde” and by many Societies of Obstetricians.

**Goals/methods:** Case report of an unvaccinated pregnant woman evaluated at the Emergency Room (ER) of Hospital Pedro Hispano (HPH) based on clinical records.

**Results:** A 39-year-old woman, 30 weeks pregnant, not vaccinated for seasonal influenza, was admitted to the HPH presenting with cough, fever (39°C), myalgias and general malaise with about 1 week of evolution and progressive worsening. On entry, she was hemodynamically stable and had no significant findings on physical examination. Blood tests showed positive for influenza virus RNA. She was evaluated by obstetrics, with normal cardiocography and obstetric ultrasound. She had progressive worsening of the condition throughout the day, with development of hypoxemic respiratory failure and the need for orotracheal intubation. The patient was then transferred to the reference hospital of the area for Extra-Corporal Membrane Oxygenation (ECMO). Emergency caesarean section was performed the next day. Live male newborn, 1670g weigh, with APGAR index 1/2/4. The woman was hospitalized for 34 days in the Intensive Care Unit with Influenza A Pneumonia with secondary bacterial infection with *Klebsiella pneumoniae*, complicated by severe refractory Acute Respiratory Distress Syndrome. The newborn was hospitalized for 69 days in a neonatal intensive care unit diagnosed with bilateral interventricular hemorrhage grade III and severe diffuse encephalopathy.

**Conclusion:** The reported case demonstrates the potential severity of influenza virus infection in pregnant women, with a substantial worsening of the clinical condition within a few hours. This highlights the key role of vaccination during pregnancy as well as the importance of a careful and quick assessment of this condition in pregnant women.

### PO 33

#### **SEROCONVERSION OF TOXOPLASMOSIS: THE EXPERIENCE OF PEDRO HISPANO HOSPITAL IN THE LAST 17 YEARS**

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**Introduction:** Toxoplasmosis is an infection caused by the intracellular parasite *Toxoplasma gondii*. When acquired during pregnancy, parasites can be transmitted to the fetus causing congenital infection. About 80% of the Portuguese population is seronegative to toxoplasmosis and the incidence of maternal infection is 1 to 8 in 1000 pregnant women. In Portugal, toxoplasmosis seroconversion is screened in every trimester of the gestation.

**Goals:** To assess the occurrence of toxoplasmosis seroconversion during pregnancy plus maternal and neonatal clinical outcomes.

**Methods:** Sample: women with suspected toxoplasmosis seroconversion during gestation followed at the Obstetrics/Infectious Pathology consultation, whose delivery occurred at Pedro Hispano Hospital (PHH) between 2002 and 2018. Analysis of medical files to obtain data regarding pregnancy, childbirth and neonatal outcomes.

**Results:** Between 2002 and 2018, 31 pregnant women were followed at the PHH Obstetrics/Infectious Pathology consultation for suspected toxoplasmosis seroconversion. Eight were excluded since seroconversion was not confirmed. The sample of 23 pregnant women had an average age of 25 years, 75% of whom were primigravid. Seroconversion occurred in the first trimester in 11 cases, all with low IgG avidity; in the 2nd trimester in 8 cases and 4 in the 3rd trimester. Amniocentesis was performed in 16 patients in order to determine the presence of *Toxoplasma gondii* PCR on the amniotic fluid, and turned out negative in all of them.

Only two women did not initiate spiramycin pro-

phylaxis because childbirth occurred too close to the diagnosis confirmation. One pregnant woman underwent treatment with pyrimethamine, sulfadiazine and folinic acid.

Delivery was eutocic in about 55% of the cases. There were 4 cases of preterm births, one of them an extreme premature (25 weeks). Two of the newborns had an Apgar index below 7 at minute 5.

In 21 cases the placenta underwent anatomopathological evaluation. Placental infection was confirmed in two cases. Neonatal serology in these cases confirmed congenital infection by *Toxoplasma gondii*. In the remaining cases, there was a decrease in newborn IgG as expected.

**Discussion/Conclusions:** Of the 31 suspected seroconversions in the past 17 years, 23 were confirmed and only 2 cases of congenital toxoplasmosis infection occurred.

Congenital toxoplasmosis infection can lead to severe brain sequelae and prevention of infection during pregnancy is of great importance.

## PO 34

### CONGENITAL TOXOPLASMOSIS: TWO CASES IN THE LAST 17 YEARS

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**Introduction:** Toxoplasmosis is an infection caused by *Toxoplasma gondii*. When acquired during pregnancy, parasites can be transmitted to the fetus causing congenital infection. Lower gestational age at the time of maternal infection is associated with a higher risk of congenital infection.

**Goals:** To describe 2 clinical cases of congenital toxoplasmosis occurring at Pedro Hispano Hospital (PHH) in the last 17 years.

**Methods:** Sample: women with congenital to-

xoplasmosis whose delivery occurred at PHH between 2002 and 2018. Data regarding pregnancy, childbirth and maternal and neonatal outcomes were obtained from medical files.

**Results:** Case 1: 19-years-old healthy woman, primigravid and non-immune to toxoplasmosis in the 1st trimester. The analytical study at 19 weeks showed equivocal toxoplasmosis IgM. Seroconversion was confirmed four weeks later. Before starting surveillance in PHH she was admitted to the emergency room (ER) at 25 weeks in labor. The delivery was eutocic. The female newborn had extremely low birth weight (690g; P5-10), an APGAR index (AI) of 1/2/2 and was admitted to the intensive care unit. The placental analysis revealed *Toxoplasma gondii* cysts. The newborn was started on treatment with pyrimethamine, sulfalazine and folinic acid at 1 month of life. Currently, at 17 years old, she has complete blindness of the right eye and light cognitive impairment, requiring multidisciplinary follow-up.

**Case 2:** 18-years-old healthy woman primigravid, non-immune to toxoplasmosis by the 2nd trimester of pregnancy. The 35 weeks' analytical study showed equivocal toxoplasmosis IgM, for which she started prophylactic treatment with spiramycin. Seroconversion was confirmed 2 weeks later. The patient was admitted to the ER at 37+3 weeks in labor. The delivery was eutocic. The female newborn had 2570g (P10-50) and an AI of 9/10. *Toxoplasma gondii* cysts were found in the placenta and the newborn started treatment with pyrimethamine, sulfalazine and folinic acid soon after delivery, presenting no complications in the neonatal period. A retinal scarring lesion was later diagnosed but no other complications were found during follow-up.

**Discussion/Conclusions:** The 2 cases presented refer to the only cases of congenital toxoplasmosis diagnosed in PHH in the last 17 years. Both newborns had sequelae due to congenital infection, highlighting the importance of surveillance and screening during

## PO 35

### EFFICACY OF AN EDUCATIONAL BOOKLET FOR PREVENTING VERTICAL HIV TRANSMISSION: A CLINICAL TRIAL

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Portugal; University of Dundee, Escócia*

**Introduction:** The lack of educational approaches for HIV positive pregnant and postpartum women coupled with poor knowledge for preventing HIV vertical transmission (HIV-VT) have a negative impact on the vulnerability of the mother-child binomial. The use of educational booklets by trained health workers enables the establishment of a co-participatory and dialogical relationship, providing greater autonomy to perform the standard care for HIV-VT prevention.

**Goal:** Test the efficacy of the educational booklet on knowledge of care for HIV prevention. **Method:** This is a randomized controlled clinical trial conducted in three public maternity hospitals in Fortaleza-CE, Brazil, from January 2017 to May 2018. One hundred and four HIV+ mothers were eligible, but there was 56.7% dropout, leaving the sample with 45 women assigned to an intervention group (n=24) and a control group (n=21). The pregnant women who participated in the control group (CG) received standard care from the service and the intervention group (GI) in addition to the standard care had access to the booklet. The research was conducted in three phases (Evaluation 1 + Randomization + Intervention, Evaluation 2 and Evaluation 3). Assessment 2 took place on the scheduled day of the consultation following the first assessment or by telephone 7-15 days after the baseline. Assessment 3 took place 30

days after delivery by telephone or in person. Parametric and nonparametric tests were used for intra and intergroup comparisons. The research was approved by the Ethics and Research Committee and registered in the Brazilian Clinical Trials Registry platform.

**Results:** Groups were homogeneous in relation to sociodemographic characteristics, except regarding race ( $p=0.030$ ). There was no intergroup difference in the average women's knowledge score throughout the study. However, in the intragroup analysis in the three phases of the study, the primer was effective to improve knowledge of HIV + pregnant women in the short-term ( $p=0.002$ ), remaining high in the long-term ( $p=0.033$ ) relative to the baseline.

**Discussion/Conclusion:** The booklet has increased knowledge of care for the short- and long-term prevention of HIV-TV in seropositive pregnant women and may be another prenatal strategy to empower mothers living with HIV and additional supportive information towards necessary steps to minimize the risks of HIV-TV.

## PO 36

### PEONS: PREDICTION OF EARLY ONSET NEONATAL SEPSIS AFTER PRETERM PREMATURE RUPTURE OF MEMBRANE BY MICROBIOME ANALYSIS

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**Introduction:** Around 30 to 40 % of all spontaneous preterm births are caused by preterm premature rupture of membranes (PPROM). Overall, the risk-rate of developing early-onset neonatal sepsis after, PPRM, is no less than 14 - 22 % [Hanke et al., 2015]. But the established diagnostic tools are currently unable to provide a rapid and accurate determination of the estimated risk for poor neonatal outcomes related to early-onset neonatal sepsis (EONS). The first analyses showed recently that the vaginal microbiota composition can predict the high-risk subgroup of subsequent EONS after PPRM [Brown et al., 2018]. There is an unmet need to confirm this preliminary data in daily clinical practice to identify this high-risk group as early as possible.

**Goals:** The hypotheses of the PEONS pilot trial are:

A predictive shift in the composition of the vaginal microbiota in our PPRM cohort early and sensitively identifies the high-risk subsequent EONS.

Individual microorganisms colonizing pregnant women with PPRM are identified in the corresponding neonates on 1st day of life.

**Methods:** The prospective multicenter PEONS pilot trial enrolls full age pregnant woman with PPRM event between 22+0 and 34+0 weeks of gestation (n = 65). Development of an EONS is defined as the primary endpoint (group 1: EONS criteria met, n = 15; group 2: EONS criteria not met, n = 50). The sample collection includes vaginal swabs, umbilical cord blood, and neonatal pharyngeal and rectal swabs as well as the meconium for microbiome analysis. Microbiome analysis will be performed qualitatively and quantitatively by 16S rRNA sequencing. Additionally, metagenome analysis by 'Nanopore' sequencing as proof-of-principle will be realized.

**Results:** The recruitment process started effectively (August 2019: 33 mother-neonate pairs). Study design, an interim analysis of the study data and first sequencing results will be reported. Up to date results confirm the feasibility of the pilot trial.

**Discussion/Conclusion:** The PEONS pilot trial investigates the vaginal microbiota composition in PPRM patients for development of an EONS. Based on preliminary results, the microbiota composition may predict an EONS and may correspond to the fetal microbiota. How far microbiota composition may predict an EONS and corresponds to the fetal microbiota will be discussed based on preliminary results.

## PO 37

### EVALUATION OF C-TERMINAL ALPHA-1 ANTITRYPSIN PEPTIDE (CAAP48) AS A PUTATIVE BIOMARKER TO ACCESS EONS AFTER PPRM

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**Introduction:** Around 30 to 40 % of all spontaneous preterm births are caused by preterm premature rupture of membranes (PPROM). Overall, the risk-rate of developing early-onset neonatal sepsis after PPRM is no less than 14 - 22 % [Hanke et al., 2015, Brown et al., 2018]. But the established diagnostic tools are currently unable to provide a rapid and accurate determination of the estimated risk for poor neonatal outcomes related to EONS.

Recently, C-Terminal Alpha-1 Antitrypsin Peptide (CAAP48) as a cleavage product of Alpha-1-Antitrypsin due to bacterial proteolytic activity could be identified as potential discriminatory sepsis biomarker [Blaurock et al., 2016]. Up to now, such a discriminatory sepsis biomarker is not established in the diagnosis of EONS.

**Goals:** The hypotheses of the PEONS-CAAP48 project as nested co-study to the PEONS pilot

trial are: Is CAAP48 a putative biomarker to assess EONS early in umbilical cord blood of neonates born by pregnant women with PPRM? Is the diagnostic performance of CAAP48 superior to the established biomarkers as C-reactive protein, interleukin 6, procalcitonin or white blood cell count?

**Methods:** The prospective multicenter PEONS pilot trial enrolls full age pregnant woman with PPRM event between 22+0 and 34+0 weeks of gestation (n = 65). Development of an EONS is defined as the primary endpoint (group 1: EONS criteria met n = 15, group 2: EONS criteria not met n = 50). CAAP48 analysis is performed in antepartum (maternal blood), peripartum (maternal blood, umbilical cord blood) and postpartum (neonatal blood) serum samples by mass spectrometry according to a proof-of-concept. This is to perform a structured evaluation of CAAP48 as a potential 'pathogen-derived' marker within the exceptional and well-characterized cohort of PPRM patients and their neonates.

**Results:** The recruitment process started effectively (August 2019: 33 mother-neonate pairs). Study design, an interim analysis of the study data and first CAAP48-results will be reported.

**Discussion/Conclusions:** In the context of EONS development in neonates after maternal PPRM, for the first time, CAAP48 is discussed as a potential early and sensitive diagnostic tool for the EONS-PPROM-high risk group.

## PO 38

### AN EXPLORATORY STUDY ON PSYCHOSOCIAL FACTORS RELATED TO WOMEN INFERTILITY

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**Introduction:** Infertility is a condition known to have an impact on psychosocial factors. However, studies focusing on the Angolan population are rare.

**Goals:** To evaluate psychosocial factors of women in Cabinda (Angola) diagnosed with infertility.

**Methods:** Study conducted between March and May at the May 1st Hospital. The Screen IVF questionnaire (34 items with answers on a 4-point likert scale) was applied, which evaluates anxiety, depression, social support and thoughts regarding fertility problems.

**Results:** Twenty-eight women of reproductive age, with a mean age of 26 years, diagnosed with infertility, participated in the study. The average anxiety level was 26.5 (SD = 3.8), higher than the limit value of 24 for a positive screening. The majority of cases (85.7%, 24 out of 28) had anxiety values higher than 24, which corresponds to a positive result. The mean depression values were 8.8% (SD = 4.9), which was above the threshold value of 4 for a positive screening. As for anxiety, the majority of cases (85.7%, 24 out of 28) had values that correspond to a positive screening for depression. The mean value in the social support scale was 12.3 (SD=2.7), in the acceptance scale was 13.7 (SD = 2.9), and in the support scale was 12.6 (SD = 2.9). In the case of social support and acceptance, these values suggest a risk.

**Discussion:** The present study revealed a relationship between anxiety and depression with infertility-related cognitions. Also, it highlighted

the importance of emotional responses that conforms to theories about the cognitive process. Our study recognized the importance of cognition, social support and acceptance of fertility problems, which is in line with previous studies conducted in Portugal and other countries. Anxiety, depression, helplessness cognitions, acceptance related to infertility and social support are important factors that should be taken into account to treat infertility.

**Conclusion:** The results obtained indicate that women diagnosed with infertility and undergoing treatment have some risk factors in the psychosocial dimension that should be considered in diagnosis and treatment of infertility.

**Keywords:** Infertility, psychological assessment, psychological intervention.

## PO 39

### CHARACTERIZATION OF GYNECOLOGY CONSULTATION AT A PUBLIC HOSPITAL IN CABINDA (ANGOLA)

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**Introduction:** Genital infections are a serious public health problem and constitute the main reason for women seeking gynecological appointments. Also, they are a major cause of female infertility, especially when the diagnosis is not made timely. In Angola, undiagnosed gynecological infections are a potential cause of asymptomatic infertility, and no previous studies exist addressing this relationship.

**Goals:** To evaluate the prevalence of different gynecological diseases, particularly infectious diseases, in the gynecology service of the public hospital 1st of May (Cabinda, Angola), and, whenever possible, correlate them with the diagnosis of infertility.

**Methods:** This is a retrospective study based on

the information available at the hospital's clinical processes between 2015 and the first half of 2017. Data were collected between August and September 2017.

**Results:** Processes screening allowed collecting a sample of 5942 women at reproductive age who sought the hospital gynecology service. The participants were in the age group of 25-34, 28 (SD = 28.6). The diagnosis of pelvic inflammatory disease (PID) presented the highest prevalence with 24.0% of cases, mainly due to late diagnosis, and whenever possible was correlated with infertility. The population status was characterized by infertility (17.6%), vaginal infections (12.6%), urinary infections (10.9%), uterine myomas (5.6%), ovarian cysts (3.1%) and other unknown causes of infertility (10.4%). Discussion: Primary and secondary infertility have been presented in many studies with a high prevalence. The prevalence of vaginal infections, with 12.6%, is in accordance with studies done in Brazil, ranging from 4.7% to 12.2%. The fourth prevalence found, urinary tract infections (10.9%), also corroborates studies from Brazil.

**Conclusion:** PID had the highest prevalence among the gynecological pathologies reported as causes of appointment in this Hospital, and may be an important cause of female infertility.

**Keywords:** female infertility, Angola; Cabinda, infertility-associated diseases

## PO 40

### THE CHALLENGE OF SURVEILLANCE FOLLOWING VAIN2/3 TREATMENT – THE FAIL ON THE FOLLOW-UP CONSULTATIONS

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**Introduction:** Vaginal carcinoma corresponds to 2% of all the neoplasms of the female genital tract with a ratio of 1:100.000. The majority

of cases are due to HPV infection. Past medical history of anogenital carcinoma, particularly of the cervix, is a major risk factor. Approximately 30% of all the women with primary vaginal carcinoma have a past medical history of carcinoma in situ/invasive of the cervix treated in the previous five years.

**Clinical case:** 68 year old female, admitted due to HSIL on vaginal cytology. She had been submitted to total hysterectomy with bilateral adnexectomy eight years prior due to carcinoma in situ of the cervix. A vaginoscopy showed aceto-white lesions around the border edges of the vaginal cuff and the biopsy revealed VAIN2/3. Laser vaporization of the lesions was performed and no recurrence was noted during the six-month follow-up. Yearly co-test was negative for two years, followed by annual follow-ups with cytology. At the fifth year follow-up, it was reported urinary urgency. The patient did not present any visible vaginal lesion, only a mucous retraction that further examination revealed to be secondary to a vaginal node. CT scan showed a solitary node at the left superior portion of the vaginal cuff measuring 54x51x46mm. Directed biopsy revealed spinocellular carcinoma. HPV testing was repeated and positive for type 16. The diagnosis was vaginal carcinoma stage III (FIGO) and treated with radical chemoradiotherapy. One year later, the patient was diagnosed with a pelvic recurrence, and is currently receiving palliative chemotherapy.

**Discussion and conclusion:** This case is relevant due to its ability to illustrate the challenges faced during follow-up VAIN2/3 treated lesions. The cytology results after vaporizations were always negative. The negative HPV test on the second year follow-up misleadingly suggested low risk for recurrence. Confronted with the relapse, HPV 16 proved to have an important role in the carcinogenesis process.

## PO 41

### SYPHILIS IN PREGNANCY – IS PREVALENCE INCREASING?

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**Introduction:** Syphilis is a sexually transmitted disease caused by *Treponema pallidum*. In recent years there has been a worldwide increase in the incidence of this condition, particularly in women, increasing the number of cases in pregnancy and, consecutively, of congenital syphilis.

**Goals:** Description of sociodemographic characteristics and pregnancy outcomes in women with syphilis.

**Methods:** Retrospective descriptive study of women diagnosed with syphilis during pregnancy, from 2009 to 2018, at Bissaya Barreto Maternity Hospital.

**Results:** Twenty-six pregnant women with syphilis were included in this study. The number of cases has increased in the last few years. The average maternal age was 28 years, and the majority of the patients were in the 25-29 age group (38.5%). 69.2% were single. Women had mainly primary (31.8%) or basic (36.4%) education. Most were multiparous (57.7%), with an average of two pregnancies (SD 1.394). 15% had smoking or toxicophilic habits and 11.5% had another associated sexually transmitted disease. Pregnancy was poorly monitored in 23.1% of these women. All cases were in the primary phase and were most frequently diagnosed in the 1st and 3rd trimesters. 96.2% were correctly treated with penicillin G benzathine and 66.6% of partners were treated. Gestational complications included two preterm births and one fetal death at 32 weeks, with pathological anatomy of the fetus compatible with treponema infection.

**Conclusion:** The incidence of syphilis in this

maternity has been increasing in recent years, which is in line with the latest worldwide epidemiological data. It mainly affects women between 25 and 29 years old, with low education and poorly monitored pregnancies. These women have a higher prevalence of other sexually transmitted diseases and smoking or toxicophilic habits. Several associated gestational complications are described, including fetal deaths.

## PO 42

### SEPSIS TO LISTERIA MONOCYTOGENES IN A PREGNANT WOMEN – CASE REPORT

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**Introduction:** *Listeria monocytogenes* infection is a serious complication of pregnancy, and its incidence has increased over the years (0.8 out of 1,000 births in 2002). This infection carries a 40-50% probability of neonatal death. Early diagnosis and early initiation of therapy can improve outcome and even treat the infection.

**Methods/Results:** We describe a case of a 40-year-old pregnant woman, with a history of untreated HIV infection and first trimester gestational diabetes. She had 2 previous vaginal deliveries and 2 c-sections, with 1 neonatal death from cardiac defects and 1 miscarriage. She first came to us at 19 weeks with a history of vomiting, without fever. She improved after intravenous hydration. Seven days later, at 20 weeks, she returned with a fever of 41°C and pain in the upper quadrants of the abdomen. Her blood tests showed an anemia of 9.1 g/dl and a leukocytosis of 12.370 (68.8% neutrophile count). The PCR was 19.64. Blood cultures were taken, that turned positive for ampicillin-sensitive *Listeria monocytogenes* after 2 days. She was committed to the hospital for intravenous antibiotic therapy with ampicillin. Fetal scans were normal. On the 12th day of antibiotic therapy she develops light vaginal bleeding; the obstetric scan showed an increased PI in

the uterine arteries and an area of retroplacental detachment. The bleeding ceased after a few hours. The antibiotic treatment was continued for a total of 21 days. Ten days later, the patient returned to the hospital with significant vaginal bleeding. Twelve hours later she miscarried a dead fetus, 23 weeks. Fetal autopsy revealed a delay in the expected development for the chronological age and signs of severe anoxia. No *Listeria* was found either in the fetus or in the placenta.

**Discussion/Conclusion:** Listeriosis in an immunocompetent pregnant woman tends to be a self-limiting condition but it can have severe fetal repercussions. When it occurs in the first or second trimester, as in the case described, the probability of fetal infection is around 20%, but most end up in miscarriage or intrauterine fetal death, especially in an immunocompromised patient.

This case emphasizes the importance of a timely diagnosis and treatment in order to minimize the fetal morbi-mortality.

**Key-words:** *Listeria monocytogenes*; sepsis; antibiotic therapy; fetal death

## PO 43

### CAT SCRATCH DISEASE: A RARE AND CHALLENGING INFECTION IN PREGNANCY

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**Introduction:** Cat Scratch Disease (CSD) is a relatively common, albeit underdiagnosed, bacterial infection, transmitted to humans through the scratch or bite of a cat, with *Bartonella henselae* acting as the main etiologic agent. The typical clinical presentation consists of a febrile syndrome, with an itchy papule/vesicle at the inoculation site, followed by the development of painful regional lymphadenopathies in 2-3 weeks. Still, in up to 14% of cases an atypical presentation may appear through disease dissemination with

ocular, neurologic, articular or hepatosplenic infection; prompt institution of antibiotics is key in preventing these complications and shortening the symptoms.

Occurrence of CSD during pregnancy is rare, but is of particular relevance, as it has been associated with an increased risk of miscarriage as well as potential perinatal vertical transmission.

**Goals:** To describe a recent case of CSD acquired during the 1st trimester of pregnancy.

**Methods:** Relevant literature on this topic was reviewed. A clinical case of CSD in pregnancy is described, including diagnostic and therapeutic approaches and obstetric outcomes.

**Results:** A 33-year-old healthy woman presenting an itchy papule in the left wrist at 4 weeks of gestation associated with night sweats and multiple painful adenopathies in the ipsilateral arm, which developed 1 month after a cat scratch. The diagnosis was confirmed by lymphadenitis in the ultrasound and presence of IgG+/IgM- to *B. henselae* in serum. Treatment with azithromycin was implemented during 2 weeks. A new cycle of azithromycin with rifampin was started at 9 weeks of gestation due to refractory lymphadenopathies, resulting in a progressive improvement. An intrahepatic cholestasis was developed at 18 weeks, which was treated with hydroxyzine and ursodeoxycholic acid. Due to new-onset night sweats, an axillar lymph node biopsy was performed at 35 weeks, which identified *B. henselae* DNA. A healthy male newborn was delivered at term with 3550 g. The last follow-up showed a healthy 4-month-old child.

**Conclusions:** CSD during pregnancy may lead to increased maternal and fetal risk. Timely diagnosis and treatment is critical to a favorable outcome. There is still no standard treatment for CSD; a close follow-up is required until further studies determine the best approach.

## PO 44

### FALSE POSITIVE TREPONEMAL TEST RESULT

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**Introduction:** In utero infections are a significant cause of morbidity/mortality. Several organizations recommend pregnancy screening for syphilis. In Portugal screening is recommended in 1st and 3rd pregnancy trimesters with nontreponemal/ treponemal tests. Some laboratories changed screening performing initially a treponemal test and then reflexing positive samples to nontreponemal testing, a practice which reverses the historical approach. False-positive tests can occur and are described in pregnancy, also with treponemal tests. Approach to these cases can lead to difficulties in pregnancy management.

**Goals:** To describe a case of false positive treponemal test in a woman with anti-phospholipidic syndrome (APS). To alert clinicians to the reverse sequencing algorithm in syphilis diagnosis and its interpretation to avoid overdiagnosis or underdiagnosis.

**Methods:** Retrospective clinical case review

**Results:** A 35 years old woman was admitted at our consultation for pregnancy surveillance because of previous deep venous thrombosis associated with oral contraception. No aetiological studies had been performed. Enoxaparin was initiated and despite being pregnant, a thrombophilia study was requested. It revealed positives lupus anticoagulant and anti  $\beta$ 2glycoprotein-1 antibodies. Switching to therapeutic enoxaparin doses and low dose acetylsalicylic acid were proposed and accepted.

During pregnancy a positive anti-treponemal antibody was detected. First trimester analysis showed a negative nontreponemal test. There

was no history of past syphilis or new sexual partner. Nontreponemal test (VDRL) was negative. Ultrasound did not identified signs of foetal affection. As confirmatory treponemal test (FTA-ABS) result was not available in short time, treatment with penicillin was decided. The remaining pregnancy was uneventful. A vaginal birth occurred on the 38th week of pregnancy with a female new-born of 3245g without signs of foetal distress or infection.

After delivery the confirmation of the AFS was made.

**Conclusion:** Syphilis infection is decreasing, however a precise diagnosis to prevent adverse prenatal outcomes is necessary. In our case we identify a case of misleading false-positive test in the presence of an autoimmune disease and how the pregnancy management can be challenging in ruling out potential threatening prenatal infection.

## PO 45

### NEWBORN BATH: CHANGES IN THE SKIN MICROBIOME

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**Introduction:** The sensitive, thin and fragile skin of the newborn (NB) undergoes adaptation processes when the transition from intrauterine to extrauterine life occurs. It forms a barrier to minimize fluid and electrolyte loss, protect from infections, prevent the absorption of toxic substances and allow for thermoregulation and stability of vital signs. The immaturity of its epidermal barrier decrease the defense against microbial proliferation, making the skin more vulnerable(1). Microbiome means a group of microorganisms present in the body (bacterial flora) consisting of bacteria, mites, fungi, protozoa and virus. It performs important metabolic functions and influences the functioning of the immune system, making it difficult to colonize other microorganisms from abroad. It is influen-

ced by factors such as diet, genetics or geographical location(2,3).

**Goals:** Identify the changes that occur in the cutaneous microbiome of the newborn after the immersion bath.

**Methods:** From the research question by the PI [Co] method: Is there a change in the cutaneous microbiome (I) in the NB (P) after the immersion bath? [Co], we used the descriptors DeCS and MeSH and the Boolean combination “AND”, resulting in the search equation “Baths” AND “Infant, newborn” AND “Skin” AND “Microbiology”, applied to the EBSCOhost, CINHAl Complete databases, MEDLINE Complete, and PubMed.

**Results:** After filtering and applying the limiting and inclusion / exclusion criteria, we obtained a corpus of analysis of eight articles (from 1977 to 2018), with studies conducted between 1974 and 2015.

**Conclusions:** In a first analysis of the documents, we found five studies from the American continent (USA, Brazil and Canada), two studies from the European continent (England, Sweden) and one study from the Asian continent (South Korea). Despite the small number of studies considering the research question, seven resulted from clinical trials, three of which are randomized and one controlled, and one article that addresses three case studies. The following key ideas emerge from the results obtained in the eight studies: the first bath should be performed after the newborn's thermal and cardio-respiratory stability, the immersion bath causes less heat loss and less vital sign oscillation, the vernix must be maintained; It is suggested to reduce the frequency of the bathing interval.

## PO 46

### PREGNANCY OUTCOMES IN HIV-INFECTED WOMEN: EXPERIENCE FROM A TERTIARY CARE CENTER IN PORTUGAL

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**Introduction:** Perinatal transmission of HIV can occur in utero, during labor or postnatally. Without intervention, the cumulative HIV transmission rate in utero, intra or postpartum is 35–40%. All HIV-infected pregnant women should initiate combination antiretroviral therapy (cART), with a goal to achieve a negative viral load for HIV. Identifying HIV during pregnancy through screening tests is essential in order to prevent in utero/ intrapartum transmission of HIV. Perinatal HIV transmission can be less than 1% when virologic suppression of HIV is achieved.

**Goals:** Pregnancy outcomes in HIV-Infected women with labor in Hospital Pedro Hispano.

**Methods:** Retrospective case record analysis of 77 HIV-infected pregnant women delivering between 2000-2018 in a tertiary health care center in Portugal.

**Results:** Our population englobe 77 deliveries from HIV positive mothers in our hospital. Mean age was 29 years old (min: 18; max:43). The couple was discordant for infection in 17 cases and concordant in 31 cases. Sexual contact was prime mode of infection in 46 cases; needle injury in 3, in 2 cases sexual/ needle injury and in 26 we could not determine the mode of transmission. 27 women (35.06%) were diagnosed during pregnancy, 48 (62.23%) were already on cART at the time of conception and 2 cases were diagnosed only in peripartum time (unattended pregnancies). Out of 77 HIV-infected women, 30 were co-infected with another sexually transmitted disease (Genital herpes - 1, Pulmonary tuberculosis - 2, HBV 3; HCV - 15, Syphilis – 7; trichomonas- 2; HIV 2 - 1). Compli-

cations during pregnancy: 7 cases of fetal growth restriction; 8 cases of gestational diabetes, 2 cases of premature labor and one case of hepatic steatosis with encephalopathy. 75 HIV-infected women delivered after 37 completed weeks, 49 had a c-section, 22 had eutocic delivery, and 6 cases had assisted vaginal delivery. The viral load at the 3rd trimester/ delivery was negative in 44 cases, and > 1000 copies/mL in 20. Neonatal complications: one fetal death after delivery (mother with hepatic steatosis and encephalopathy). All alive newborns are HIV negative. **Conclusion:** With good antenatal care and multidisciplinary approach, HIV-positive women can have good pregnancy and fetal outcomes. The high number of c-sections reveal the old protocols about the effectiveness of elective c-section in reducing HIV transmission. Since 2014 guidelines no longer recommend c-section when the HIV-RNA load is negative.

#### PO 47

### THE ASSOCIATION BETWEEN SEXUALLY TRANSMITTED INFECTIONS, HUMAN PAPILLOMAVIRUS, AND CERVICAL CYTOLOGY ABNORMALITIES AMONG WOMEN IN A TERTIARY HOSPITAL

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**Introduction:** Sexually transmitted pathogens are an important cause of morbidity among sexually active women. Human papillomavirus infection (HPV) is one of the most prevalent sexually transmitted diseases among women aged < 35 years old and is the major cause of cervical cancer (CC). HPV types are classified as high (HR) or low risk (LR) based on their oncogenic potential and association with cervical cancer. Persistent infection has been causally associated with cervical intraepithelial neoplasia/squamous intraepithelial lesion and invasive CC. The association of other sexually transmit-

ted pathogens with HPV has not yet been fully elucidated. Among STIs, chlamydia have been the most commonly evaluated in conjunction with HPV, Mycoplasma and Ureaplasma spp have also been found to be co-prevalent with HPV infection.

**Goals:** Evaluate the prevalence of specific STIs in a population in CC screening consultation of a tertiary hospital during one year and to investigate associations with HPV infection and the presence of cytological and histological alterations.

**Methods:** Prospective analysis of 101 women at their first consultation during 2018 in a tertiary health care center in Portugal.

**Results:** During cervical pathology consultation in 2018 we included 101 women. The mean age was 42.43 years-old (min:20; max: 64). Of the 101 women, 19 had ≥ 5 sexual partners history. The mean of the first sexual relationship was 18 years-old. The endocervical swabs were obtained in 97 women. 42 of the 97 subjects tested positive for a STI: Mycoplasma spp. was detected in 10 women and Ureoplasma spp in 19. One woman had a mixed infection (Mycoplasma spp/ Ureaplasma spp), 2 women presented with gonococcus spp and 5 with Chlamydia Trachomatis. Among HPV positive women, 32 had HPV 16; 8 HPV 18 and 4 had coinfections for both. The resting population has positive for other types of HPV. 19 out of 101 had cytological findings within normal limits (NILM). LSIL and ASCUS were detected in 19 and 38 respectively. HSIL was detected in 7 women and ASC-H in 8. A cervical biopsy was performed during colposcopy in 57 women and the results revealed: 22 women with CIN 1; 22 with CIN 2; 6 with CIN3; 1 with CIS and 4 women with cervicitis. 30 women were submitted an excisional cervical biopsy. We observed that ISTs are more prevalent in ASCUS cytology.

**Conclusion:** Chlamydia T., Mycoplasma and Ureoplasma spp were frequently detected among women surveilled in a cervical pathology consultation.

## PO 48

### ROLE OF VAGINAL AND ENDOCERVICAL INFECTION IN PRETERM BIRTH

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**Introduction:** Preterm birth and low birth weight are the leading causes of neonatal mortality and morbidity in the developed world. Ascending genital tract infections contribute to up to 50% of premature deliveries, particularly those occurring before 30 weeks of gestation. The rate of neonatal complications has been shown to be higher in neonates born to women with microbial invasion of the amniotic cavity. Genital mycoplasmas and ureoplasma spp. are suspected of contributing to adverse outcomes such as chorioamnionitis, preterm premature rupture of the membranes (pPROM), preterm birth and bronchopulmonary dysplasia in preterm infants. The association of vaginal *M. hominis* with preterm birth has been reported as positive in some studies but not in others.

**Goals:** Evaluate the possible role of vaginal/ endocervical infection (*Chlamydia trachomatis*, *Gonococcus*, *Mycoplasma* and *ureoplasma* spp.) in preterm birth in a tertiary center in Portugal.

**Methods:** Smears taken from the posterior vaginal fornix and endocervix of pregnant women at risk of preterm labor at the time of hospitalization (2016-2018). We excluded multiple pregnancies and pPROM.

**Results:** A total of 101 pregnant women were hospitalized for experiencing symptoms of threatened preterm labor between 2016-2018. The mean age was 28.5 years-old (min: 16; max:42). 46 women were nulliparous and 11 had past history of preterm labor (mean of 33 weeks). The cervical length was < 20 mm in 89 women and the mean gestational age at the time of hospitalization was 30 weeks of preg-

nancy (min: 21; max:34). Of 101 hospitalized pregnant women, 30 had preterm labor with a mean age 33 weeks of pregnancy. The mode of delivery in preterm deliveries was: eutocic delivery in 20 cases; forceps in 3, c-section in 7 cases. When we analyzed the results of vaginal/ endocervical swab, *Mycoplasma* spp. were positive in 4 pregnant women but only one had preterm labor (28 weeks). *Chlamydia trachomatis* was found in 4 pregnant women and *gonococcus* in 1, with only one preterm labor in these situations (32 weeks of pregnancy). *Ureoplasma* spp was identified in 21 women and of these, 6 women had preterm labor (28.57%).

**Conclusion:** We observed in this study that 30 women (29.7%) had a vaginal/endocervical infection detected at the moment of hospitalization for threatened preterm labor and 9 had preterm delivery (30%). The screening for genitourinary tract infections can be strongly recommended to be included in prenatal care.

## PO 49

### CHANGES IN CYTOKINE LEVELS IN CERVICOVAGINAL FLUID ACCORDING TO MICROBIOME COMPOSITION

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**Introduction:** Bacterial communities colonizing the vaginal environment play a role in modulating the local innate immune response. Cervicovaginal cytokine patterns change according to microscopic findings in local microbiota. However, microscopy does not reflect the diversity

of microorganism colonizing this environment. Recently, vaginal microbiome was characterized which enabled a more accurate assessment of bacterial composition. Vaginal microbiome is classified into different community state types (CST). In CST I, *L. crispatus* is the most abundant taxa observed, while *L. gasseri* predominates in CST II and *L. iners* in CST III. Protective effect of CST III has been questioned as it frequently shifts to CST IV, which is lactobacilli-deprived and shows a high bacterial diversity.

**Goals:** We aimed to compare cervicovaginal cytokine levels across distinct CSTs in women of reproductive age.

**Methods:** In this cross-sectional study, 140 Brazilian women in reproductive age were enrolled. We assessed participants' vaginal microbiome through V3-V4 sequencing using MiSeq 300 PE (Illumina, San Diego, CA). We determined interleukin (IL)-1 $\beta$ , IL-6, IL-8 and tumor necrosis factor alpha (TNF- $\alpha$ ) levels in the supernatants of cervicovaginal samples by enzyme-linked Immunosorbent assay (ELISA), according to manufacturer's instructions (R&D Systems). We compared cytokine levels among the CST groups using Kruskal-Wallis non-parametric test, followed by Dunn's post test, considering  $p$ -value < 0.05 as significant.

**Results:** Prevalence rates of CST in our population was: 30.0% (n=42) for CST I, 15.7% (n=22) for CST II, 27.9% (n=39) and 26.4% (n=37) for CST III and CST IV, respectively. Levels of IL-1 $\beta$  were significantly higher in CST III (median 43.37 pg/ml; range 0.0-2616) and CST IV (median 56.22 pg/ml; range 0.0-3407) when compared with CST I (median 5.41 pg/ml; range 0.0-3256) ( $P=0.0043$ ). For IL-6, levels were significantly increased in CST II (median 4.13 pg/ml; range 0.0-131.4) compared to CST IV (median 0.0 pg/ml; range 0.0-58.27) ( $P=0.019$ ). We found no differences in IL-8 and TNF- $\alpha$  levels across distinct CSTs.

**Conclusion:** This study provides evidence that

bacterial taxa impact the levels of cervicovaginal cytokine, including the potential role of different lactobacilli species in modulating host's immune response.

## PO 50

### SEROCONVERSION FOR CMV AND CONGENITAL INFECTION – CASE REPORT

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**Introduction:** Cytomegalovirus (CMV) is the most common cause of viral congenital infection, affecting 0.2–2.2% of all live births. Congenital CMV infection is a major cause of central nervous system impairment and the leading non-genetic cause of sensorineural hearing loss. Infants born to mothers with primary infection have a risk of congenital infection of the order of 30–40%, and 13% of these will be symptomatic at birth.

**Goals:** Retrospective analyses of a clinical case of a pregnancy followed in our institution, with description of diagnosis, management and obstetrics outcome.

**Methods:** Clinical case files analysis and literature review.

**Case report:** 33 year-old pregnant woman, III-GIP, no relevant medical history. Seroconversion for CMV (IgG+, IgM+) with an IgG low avidity index detected at 17w+6d. Amniocentesis was performed at 23w+2d, presenting a positive result for CMV DNA in the amniotic fluid. Serial ultrasounds were performed (intervals of 1-2weeks) for detection of CMV infection related abnormalities. Fetal cerebral magnetic resonance imaging (MRI) at 23w+2d revealed no abnormalities. At 26w, antiviral therapy with Valaciclovir 2g 4x per day was initiated. Cerebral MRI at 33w+5d detected small bilateral temporal cysts. Fetal echocardiogram performed at 36w+3d revealed right atrial and ventricular dilation and suspicion of an aortic coarctation.

Premature rupture of membranes at 36w+6d and vaginal delivery at 37w. Neonate blood and urine CMV testing were positive at birth. Cerebral MRI detected occipital cysts and left hippocampus dysplasia. No aortic coarctation was detected. Brainstem Evoked Response Audiometry (BERA) test was normal. Valganciclovir 57mg 2x per day was initiated in the newborn.

**Conclusion:** Prenatal diagnosis of CMV infection is challenging and options for prevention and treatment are limited. Regarding the follow-up, ultrasound and MRI should be considered as complementary imaging modalities for the investigation of the fetal brain. When both are performed in the third trimester in a fetus known to be infected with CMV, they have a 95% sensitivity for the identification of related central nervous system lesions. Medical therapies aimed at reducing the risk of transmission, and likelihood and/or severity of neonatal infection have been investigated, including antiviral drugs such as Valaciclovir, but haven't been routinely recommended to women carrying a fetus with congenital CMV infection. More studies in this area are necessary.

## PO 51

### DOES SEXUAL PRACTICE WITH WOMEN INCREASE THE RISK OF DEVELOPING BACTERIAL VAGINOSIS?

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**Introduction:** Literature has showed that women who have sex with women (WSW) are at greater risk of developing bacterial vaginosis (BV) than heterosexual women. However, there are few studies about specific risk factors in this population.

**Goals:** To determine the prevalence of BV in Brazilian WSW and to analyze if the sexual prac-

tice increases the chance of having BV.

**Method:** Cross-sectional study comprising 133 women (53 WSW and 80 WSM) older than 18, living in São Paulo state, Brazil. Sociodemographic data, sexual behavior, intimate hygiene and access to health services were obtained through interviews from January to May, 2019. Microscopic analyses of vaginal smears Gram-stained were used for vaginal microbiota classification according to the Nugent criteria as normal (score 0 to 3), intermediate (score 4 to 6) and BV (score 7 to 10). Logistic Regression was carried out to identify the chance of having BV due to sexual practice. The analyzes were performed using the software SPSS 22.0. This research was approved by the ethics committee, report 3.320.951.

**Results:** Out of the 133 participants, the mean age and years of study concluded was 25 (18-50) and 15 (1-21), respectively. In this group 77.4% defined themselves as white, 83.5% was single, 97.0% receive vaginal penetration, 27.8% changed partners in the last 3 months and only 21.1% used condoms consistently. The general prevalence of BV was 24.1%, 24.5% in WSW and 23.7% in women who have sex with men ( $p=0.989$ ). Changing partners in the last 3 months was independently associated to BV [5.20 (CI95%; 1.65 – 16.41);  $p=0.005$ ].

**Conclusion:** This study provides evidence that sexual practice does not influence the prevalence of BV. The findings of this study suggest the possibility of BV sexual transmission what demonstrates the importance of educational actions in sexual and reproductive health.

## PO 52

### PREVALENCE OF VULVOVAGINAL CANDIDIASIS AND ASSOCIATED FACTORS IN WOMEN WHO HAVE SEX WITH WOMEN – PRELIMINARY RESULTS

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**Introduction:** Vulvovaginal candidiasis (VVC) remains one of the frequent infections in women. The main pathogen remains *Candida albicans* as the dominant pathogenic species. It is associated with an array of factors, including diabetes mellitus, pregnancy, immunodeficiency, use of oral contraceptive pills and non-sexual factors such as vaginal douching. The literature shows that VVC is prevalent in black women and in women who have sex with women (WSW), but the sexual transmission was not confirmed.

**Goals:** To determine the prevalence of VVC in WSW and to analyze the risk factors for this infection.

**Method:** Cross-sectional study comprising 133 women (53 WSW and 80 WSM) older than 18, living in São Paulo state, Brazil. Sociodemographic data, sexual behavior, intimate hygiene and access to health services were obtained through interviews from January to May, 2019. Vulvovaginal candidiasis Vaginal candidosis was diagnosed by visualization of blastoconids and/or pseudohyphae in the smears Gram-stained. Logistic Regression was carried out to identify the chance of having VVC due to sexual practice. The analyzes were performed using the software SPSS 22.0. This research was approved by the ethics committee, report 3.320.951.

**Results:** Out of the 133 participants, the mean age and years of study concluded was 25 (18-50) and 15 (1-21), respectively. In this group 77.4% defined themselves as black, 83.5%

was single, 27.8% changed partners in the last 3 months, only 21.1% used condoms consistently and 42.9% hormonal contraceptive. The general prevalence of VVC was 8.3%, 9.4% in WSW and 7.5% in WSM ( $p=0.824$ ). The fact of being black increased sixfold the outcome [6.51 (CI95%: 1.07 – 39.54);  $p=0.042$ ] and the educational level was a protective factor [0.76 (CI95%: 0.61 – 0.94);  $p=0.013$ ].

**Conclusion:** The preliminary results suggest that sexual practice did not influence the prevalence of VVC. The associated factors show the high vulnerability to VVC in black women and women with low educational level.

## PO 53

### PREVALENCE OF CESAREAN SECTION AND SURGICAL SITE INFECTION IN A PUBLIC NORTHEAST BRAZILIAN HOSPITAL

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**Introduction:** Surgical Site Infection (SSI) consists of a infection at the surgical site within 30 days of the operative procedure, further classified by depth of infection: superficial incisional, deep incisional, and organ/space. With the increase in the number of cesarean sections, this is a contributing factor to the increase in SSI as well. SSI is part of healthcare-related infections, has a major impact on length of stay and costs, and carries a considerable burden on the health service.

**Goal:** To determine the prevalence of SSI and cesarean section infection in a public hospital in

Northeastern Brazil.

**Methods:** This is a cross-sectional and descriptive study. The data represent the infection rate calculated by the hospital infection control service of three gynecological hospital blocks for 2018.

**Results:** The rate of SSI was 28.6% in the first semester and 9.7% in the second semestre, with an annual prevalence of 19.2%. The deep incisional SSI accounted for 14.3% in the first half and 19.4% in the second half, the annual figure was 16.8%. The cesarean section infection rate was 3.9% in the first semester and 2% in the second semester, making a total of 2.8% annually.

**Discussion/Conclusion:** After cesarean delivery the most common SSI observed are incisional and endometritis<sup>1</sup>. Women with high body mass index have a higher risk of complications in cesarean section<sup>2</sup>. The type of SSI with the highest prevalence was superficial incisional, followed by deep incisional<sup>3</sup>, which meets our findings. Risk factors for ISS after cesarean delivery are smoking, obesity, limited prenatal care, absence of antibiotic prophylaxis, diabetes mellitus (pre-gestational and gestational), hypertensive disorders, among others<sup>4</sup>. Therefore, identifying the risk factors, using the appropriate antibiotic prophylaxis and the correct surgical technique help to reduce ISS.

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## PO 54

### INVASIVE CANDIDIASIS AFTER CAESAREAN – CASE REPORT

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**Introduction:** Invasive mycoses are life-threatening opportunistic infections, they are emerging causes of morbidity and mortality following general and gastrointestinal surgeries. Candida is the main fungus that causes these infections.

**Objective:** The aim of this paper is to describe a clinical case of fever of unknown origin after caesarean section, in which a candida albicans infected hematoma was diagnosed.

**Methods:** To perform this work, the patient's electronic clinical file was consulted.

**Case Description/Results:** A 29-years-old pregnant woman with 38 weeks and 5 days went to hospital for induction of labor because of hydramnios and suspected macrosomic fetus. She had two eutocic deliveries before. She has no relevant personal history, including autoimmune-diseases.

Induction of labor was performed with 50mcg of misoprostol intravaginal. On the same day an urgent caesarean section was decided.

During the surgery there was difficult in haemostasis with blood loss greater than 500cc. On the third day after cesarean section, started to have fever (max. 39.1°), so underwent chest and abdomen X-ray and ECG, which showed no changes. Urine and blood culture and blood analyzes were also performed. Analytically had 13 mg/dL CRP and 7.5 g/dl hemoglobin, the blood culture was negative and an E. Coli was isolated in the urine.

Started ampicillin and gentamicin and two units of erythrocyte concentrate were administer with a good response.

Abdominal and pelvic CT scan showed moderate free peritoneal effusion with fine suspended

echoes, suggestive of hemoperitoneum.

After 48 hours of antibiotic therapy, maintained high fever peaks and CRP rising, reaching 19 mg/dL.

Due to the maintenance of fever and growing inflammatory parameters, the patient underwent exploratory laparotomy 10 days postpartum, a scarce hemorrhage periuterine was observed and the exudate was collected for culture. A switch of antibiotic therapy was made to piperacillin / tazobactam.

*Candida albicans* was isolated in the exudate and so she started therapy with fluconazole 800mg dose-loading, followed by 400mg / day, after this she had no more fever.

She completed 14 days of therapy with good response.

**Discussion/Conclusions:** Although rare, it is important to consider candida infection when facing a patient with fever of unknown origin who does not respond to antibiotic therapy. Rapid diagnosis and treatment prevents the increased severity of the situation and has benefits in the cost of treatment.

## PO 55

### LYME DISEASE IN PREGNANCY: ABOUT A CASE REPORT

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**Introduction:** Lyme disease is an infectious disease, caused mainly by three pathogenic species of the spirochete *Borrelia* (previously referred to as *Borrelia burgdorferi*). Its manifestation begins firstly with an erythema migrans and nonspecific symptoms that resemble a viral syndrome and afterwards it causes arthritis, as well as cardiac and neurologic involvement. During pregnancy, diagnosis and treatment used are the same, except the use of tetracyclines. According to the most recent literature,

there is no definable congenital Lyme disease syndrome or any association between maternal Lyme disease and adverse fetal outcomes or congenital malformations. Moreover, there is no evidence of transmission of this infection by breast feeding.

**Goals:** The goal of the present study was to describe a case report followed in Senhora da Oliveira Hospital of a Portuguese 23-year-old woman without personal diseases or obstetric occurrences known that presents to the emergency service in January 2019 with dysphonia for 1 week after a previous tonsillitis resolved with antibiotics. Despite the nonmuscular relaxants, recommendation of vocal rest and maintained vigilance in otolaryngology consultations, the dysphonia remains. After a rigorous investigation, she is diagnosed with Borreliosis in 4th March and she finds to be pregnant of about 6 weeks in 26th March.

**Methods:** All data relating to the case report presented were collected from the clinical records of the hospital software programs Sclínico® and Obscare®.

**Results:** The pregnant woman in question had, since the diagnosis, follow-up of her pregnancy in hospital, in the consultations of Obstetrics / Infectious Diseases. During follow-up, all ultrasounds and routine analyzes performed were unchanged. She is currently in the middle of the third trimester of pregnancy, currently asymptomatic and without changes in the course of pregnancy. Due to the lack of scientific evidence regarding maternal-fetal transmission of the infection, this pregnant woman intends to have a vaginal delivery and to breastfeed her baby.

**Discussion/Conclusions:** Since this type of infectious disease does not interfere with the course of pregnancy and does not represent a risk factor for the fetus or future newborn, these pregnant women should be clarified and reassured of this absence of risk, despite the need to follow up their pregnancies in a hospital setting.

## PO 56

### TUBO-OVARIAN ABSCESS REQUIRING HYSTERECTOMY, BILATERAL SALPINGO-OOPHORECTOMY, HARTMANN'S SIGMOIDECTOMY AND HEMICOLECTOMY

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**Introduction:** A pelvic mass is an enlargement or swelling in the lower abdomen or pelvic region. Pelvic masses may originate from gynecologic organs or from other pelvic organs, such as the intestines, bladder and renal organs. In postmenopausal women, masses are more likely to be cancerous. A tubo-ovarian abscess (TOA) is a complex infectious mass of the adnexa that forms as a sequela of pelvic inflammatory disease. These abscesses are found most commonly in reproductive age women and are a life-threatening condition.

**Case report:** A 64-year-old post-menopausal woman presented to the Emergency Department with lower abdominal pain and fever of 2 weeks duration. Laboratory evaluation was remarkable for a white blood cell count of 22300/uL, hemoglobin of 10.1g/dL and C-reactive protein level of 41.93mg/dL. TC revealed a heterogeneous multi-septated right lower quadrant cystic mass, measuring 103x89mm, and mild ascites in the pelvis. It was not possible to define if the mass was of gynecological or intestinal origin.

Urgent exploratory laparotomy revealed a huge cystic mass involving the cecum, sigmoid colon and uterus. During the mobilization, there was rupture of the mass and discharged a large amount of purulent fluid. Hartmann's sigmoidectomy, hysterectomy with bilateral salpingo-oophorectomy, right hemicolectomy and descending colon colostomy were performed. She was treated with intravenous antibiotic therapy. Her postoperative course was uneventful and she was discharged on postoperative Day8. The

pathological examination showed left ovarian and Fallopian tube tissue with inflammatory infiltrate with abscessed areas, extending to the uterine and colic walls, which were compatible with a TOA. The cytological examination of the ascitic fluid did not reveal malignant cells.

**Discussion:** TOA usually occurs in young females though rarely seen in post-menopausal women as well. Prompt diagnosis and treatment of TOA is of prime importance, keeping in view the severity of short and long term sequel of untreated condition. Serious complications due to abscess rupture could be sepsis, peritonitis and Fitz-Hugh-Curtis syndrome. The treatment options include IV antibiotics, image guided or surgical drainage of abscess or combination of all.

**Conclusion:** TOA should be listed as a differential diagnosis in all post-menopausal women, to enable timely management and better prognosis and avoid delayed management, even if patients are more than 60 years old, as is our patient.

## PO 57

### NEONATAL SEPSIS IN A HIGH RISK OBSTETRIC POPULATION: TRIPLET PREGNANCIES

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**Introduction:** Neonatal sepsis is a systemic disease associated with hemodynamic changes with an important role in neonatal morbidity and mortality. It is crucial to implement preventive and therapeutic measures, like antibiotic administration to patients with preterm premature rupture of membranes, as it has been proven to be associated with prolongation of pregnancy and a reduction in the rate of clinical chorioamnionitis and neonatal sepsis. Twins pregnancies, especially triplets have a high rate of preterm deliveries, so they are a particular group at risk

for development of neonatal sepsis.

**Goals:** To study the incidence of neonatal sepsis in triplet pregnancy.

**Methods:** Prospective cohort study of women with triplet pregnancy who delivered between 1996 and 2015 in a tertiary hospital. Maternal characteristics, Preterm Premature Rupture of Membranes (PPROM), gestational age at delivery, streptococcus group B colonization (routine screening since 2003), and neonatal sepsis were evaluated.

**Results:** 96 triplet pregnancies here included, 6 cases of monochorionic pregnancies (6.2%), 44 cases of dichorionic (45.8%) and 46 cases of trichorionic (50.4%). Twelve cases (9.7%) of PPRM occurred. There were 14 (14.5%) deliveries under 28 weeks and 40 (41.7%) between 28-32 weeks. Almost all deliveries were by caesarean section (98%), with only 2 cases by vaginal delivery. Neonatal sepsis occurred in 39 (16.1%) newborns, including 7 (2.9%) cases of early sepsis and 32 (13.2%) cases of late sepsis (> 48h of life). Extreme prematurity was associated with sepsis, 50% (9% early) incidence in the group at 24-27 weeks, 22% (3.3% early) at 28-32 weeks and 6% (1.6% early) after 32 weeks.

Tree cases (1,2%) of *Streptococcus agalactiae* were identified in late sepsis blood culture. *Staphylococcus epidermidis* was the most identified in the other cases (22 newborns), followed by *Staphylococcus aureus* (11 cases), *Escherichia coli* (2 cases) and 6 cases with other agents. Fourteen (5.8%) early neonatal death occurred but only 1 (0.4%) related to early sepsis.

**Conclusions:** Triplet pregnancy is a rare condition in human reproduction but is associated with a high rate of prematurity and associated morbidities. Early neonatal sepsis was low in these group, reflecting the efforts of prophylactic measures in the obstetric care.

## PO 58

### BACTEREMIA OF GARDNERELLA VAGINALIS IN A PREGNANT WOMAN

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**Introduction:** Gardnerella vaginalis is considered a common pathogen in vaginosis and has been associated with genital tract infections. Bacteremia is rarely reported.

**Goals:** Awareness for bacterial vaginosis in pregnant women and their complications.

**Methods:** Description of a case of bacteremia in a term pregnant woman.

**Results:** A 33-year-old primigravida was admitted in our emergency room at 38 weeks and 5 days, with fever and right back pain. She was a smoker and had a history of bronchial hyper-reactivity related to respiratory infections. Laboratory parameters revealed an elevated C-reactive protein, without leukocytosis. Uroculture and blood culture were proceeded. An empiric antibiotic therapy with intravenous ceftriaxone 2 gr was started, for suspected urinary tract infection. In the next day, she went in spontaneous labor. A cesarean section was performed due to a non-reassuring fetal tracing at 6cm dilation. A different course of antibiotics including intravenous ampicillin, gentamicin and clindamycin was started because of suspected chorioamnionitis. On the first day postpartum the patient developed high fever (40°C) and showed worsening of inflammatory parameters. An CT scan was performed which demonstrated signs of pneumonia. The antibiotic was then changed to piperacillin. At the fourth day, the uroculture was negative and the blood culture revealed bacteremia of Gardnerella vaginalis, so metronidazole was initiated. Gradually, the patient had clinical and analytical improvement. On day 8 postpartum she was discharged with oral metronidazo-

le. The neonate was discharged 10 days after birth without infectious complications.

**Discussion/Conclusions:** *Gardnerella vaginalis* is associated with bacterial vaginosis. Fifty to 75 percent of women with bacterial vaginosis are asymptomatic. Symptomatic women present with unspecific discharge and/or unpleasant “fishy smell”. It has also been associated with maternal and neonatal septicemia, though it is a rare event. When it occurs, the bacteremia is most commonly found in postpartum. However, in this case, it had already developed and probably triggered labor, even the patient didn't show any signs or symptoms of bacterial vaginosis at admission. It was essential to perform bacterial culture tests in order to identify this unusual causal pathogen and treat accordingly.

## PO 59

### PELVIC INFLAMMATORY DISEASE – 5 YEAR EXPERIENCE OF PEDRO HISPANO HOSPITAL

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**Introduction:** Pelvic inflammatory disease (PID) is an infection of the female reproductive system involving the uterus, ovaries and/or fallopian tubes. It is often accompanied by involvement of the neighbouring pelvic organs and may complicate as tubo-ovarian abscess. Untreated PID can result in long-term complications, including infertility, ectopic pregnancy, chronic pelvic pain and cancer. This highlights the importance of an early diagnosis and adequate treatment.

**Goals:** Analysis of admission cause, need for surgery and the length of stay. Evaluate the correlation between C-reactive protein (CRP) and white blood cell (WBC) count at admission and length of stay or need for surgery.

**Methods:** Retrospective analysis of the 38 cases of PID admitted in Pedro Hispano Hospital in the last 5 years (January 2014-December 2018). Two cases were excluded because they

were discharged against medical advice. Statistical analysis was performed using SPSS software.

**Results:** A total of 36 patients were diagnosed with PID presenting criteria for hospital admission. The mean age of the patients was 45 years (range 21-90). All patients complained of abdominal pain at admission, 18 (50%) also complained of fever and 14 (38,8%) had purulent vaginal discharge, with 7 patients (19,4%) presenting the 3 of them. The PID followed an uterine/adnexa instrumentation or surgery in 6 cases (16,6%). Eight patients (22,2%) had intrauterine devices.

Main admission causes were tubo-ovarian abscess (55,3%) and pyosalpinx (19,4%).

Antibiotic therapy was instituted in all cases, with need for surgery in 23 cases (60,5%). A microbiological agent was identified in 18 cases (50%). The mean length stay was 7 days (minimum 3; maximum 23).

There was a statistically significant correlation between CRP values and length hospital stay ( $p=0,002$ ), but not for WBC count ( $p=0,86$ ). Additionally, CRP values were statistically different ( $p=0,018$ ) in the group submitted to surgery.

Conversely, there was no statistically significant difference in the length stay ( $p=0,68$ ) between the patients who presented 3 symptoms/signs at admission (abdominal pain, fever and purulent vaginal discharge) and those with just 1 or 2.

**Discussion/Conclusions:** In our sample, antibiotic therapy was not sufficient in most cases, mainly because of the PID severity. The CRP values, but not WBC count, were predictive of more prolonged hospital stay and need for surgery.

## PO 60

### ACUTE PERFORATED APPENDICITIS IN 3RD TRIMESTER OF PREGNANCY – RELEVANCE OF EARLY DIAGNOSIS AND TREATMENT – CLINICAL REPORT

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**Key words:** acute abdomen, appendicitis, perforation, preterm pregnancy

**Introduction:** Acute appendicitis is the most common non-obstetric surgical problem during pregnancy occurring in 1/1500 cases, a similar incidence to that in normal population, nonetheless with higher rates of perforation.

Due to anatomical changes, high prevalence of abdominal pain and physiologic leukocytosis during pregnancy, the accurate diagnosis of appendicitis can be challenging. A prompt intervention is paramount, especially in the second half of pregnancy where the complicated form of the disease is more common.

**Objectives:** Emphasize the relevance of early diagnosis and therapy in case of appendicitis in the 3rd trimester of pregnancy.

**Results:** A 32-year-old nulliparous at 35 weeks of gestation, healthy, without known surgeries or allergies was admitted to other hospital with an abdominal pain in the lower abdomen for 3 days, being discharged with medication for urinary tract infection. 2 days later, she was admitted to our Emergency Department with a generalized and increasing abdominal pain without other symptoms, hemodynamically stable, subfebrile, with abdominal palpation showing increased uterine tone and diffuse pain with guarding. The gynecological exam showed no alterations. Ultrasound revealed a cephalic fetus with reduced mobility, placenta without signs of detachment and normal amniotic fluid. The cardiotocography showed early deceleration and blood analysis revealed highly increased C reactive protein (20.6 mg/dL).

She was hospitalized and corticosteroids for lung maturation and prophylactic antibiotics were provided. Given the uncontrolled increase of abdominal pain, hemodynamic instability and CTG deterioration (fetal tachycardia and repeated decelerations), a c-section was performed. The abdominal cavity had pus in its entire length, making access to the uterus difficult. A female newborn was delivered, 2270g, APGAR score 7/6/8. When further exploring the cavity, a retrocecal and gangrenous appendix was identified, removed and a peritoneal lavage was completed. After surgery, the patient required mechanical ventilation, fluid therapy and vasopressor support in the ICU. She was discharged 11 days after admission.

**Conclusion:** Acute appendicitis is the most common cause of acute abdomen in pregnancy. Even though diagnosis is challenging, appendicitis demands for high level of suspicion and immediate intervention is required to avoid potential harm to both fetus and mother.

## PO 61

### MOTHER TO CHILD TRANSMISSION OF HIV-1: SYSTEMATIC REVIEW

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**Introduction:** The mother-to-child transmission (MTCT) has been the principal cause of HIV-1 infection in children, and it may occur before, during or after birth. Treatment of pregnant women and adequate prophylaxis reduced transmission rates from 15-25% to 2%, in Western Europe.

**Goals:** The objective of this study is to charac-

terize the population of pregnant women with HIV-1 infection, as well as evaluate the MTCT of HIV-1 infection in Centro Materno Infantil do Norte (CMIN).

**Methods:** This descriptive and retrospective study included all pregnancies in HIV-1 infected women, followed at our institution from January 2011 to December 2018.

**Results:** In the period studied there were 65 gestations in HIV-1 infected women and 66 neonates. Four women had two gestations. Most women already had children (78,5%) and 70.8% (n= 46) of them were caucasians. The mean of maternal age at delivery was 31,55 years (SD=5,55) and the median time of infection was 5,83 years (SD=5,41). Diagnosis of HIV-1 infection was made before gestation in 81,5% (n=53) women, during pregnancy or delivery in 18,5% (n=12) women. Sexual contact was the main form of transmission (73,8%). Twenty-three percent had co-infection with HCV. Antenatal care was performed in 93,8%(n=61) of pregnant women. During pregnancy, most women were under antiretroviral treatment (ART) (98,5%), all of them with a triple scheme. At delivery most pregnant women had an undetectable viral load but 2 had viral load >1,000 copies/mL at childbirth.

The median gestational age at delivery was 37,8 (SD1,9) weeks. Of a total of 64 deliveries, 65,6% (n=42) were c-sections. Rupture of membranes had  $\geq 4$ h in 13.3% (n=8) of the cases. Twelve (21,4%) of the newborns were premature, 33 were feminine and 17 (25,8%) had a weight  $\leq 2500$ gr at birth. All babies received prophylaxis with AZT in neonatal period and no children were breastfed. Vertical transmission wasn't verified. One newborn (1.5%) died.

**Discussion/conclusion:** In our study, there was no MTCT of HIV-1 infection. The implementation of preventive measures, and a multidisciplinary prenatal care are critical to reducing the rate of MTCT of HIV-1.

## PO 62

### TOXOPLASMOSIS DUBIOUS RESULTS IN PREGNANCY ROUTINE TESTS: THE IMPORTANCE OF PRECONCEPTION SCREENING

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**Introduction:** Toxoplasmosis is a worldwide zoonosis caused by *Toxoplasma gondii*. In a pregnant women this infection is predominantly asymptomatic but it might harm the fetus. The diagnosis relies mainly on serologic exams collected through routine screening tests. The fetus becomes infected during the period of maternal parasitemia, before the development of toxoplasma antibodies. Infection prior to pregnancy does not affect the fetus. Toxoplasma IgM antibodies suggests an ongoing infection while the presence of toxoplasma IgG antibodies indicates an ongoing or a previous infection. Discrimination between past and recent infection can be challenging and preconception routine tests might have an important role on this investigation.

**Methods:** Clinical case analysis and literature review.

**Case Report:** 33-year-old primigravida with pathological history of uveitis is referred to the obstetrician department for doubtful findings in toxoplasmosis serology. In September 2018 during the preconception tests it was reported a positive toxoplasma IgG (80) with a positive toxoplasma IgM (1,69) and low values of toxoplasma IgG avidity, suggesting an acute infection. The patient was advised to avoid pregnancy for 6 months. In March 2019, after her first trimester analysis, the toxoplasmosis results remain identical, with positive toxoplasma IgG (33) and IgM (0,69), and low values of toxoplasma IgG avidity. This serologic test was repeated after 3 weeks and the results were similar.

**Discussion:** Congenital toxoplasmosis in a newborn may predispose to decreased visual acuity/blindness, decreased hearing/deafness, or mental/psychomotor retardation. Although screening for toxoplasmosis during pregnancy is not consensual worldwide, in Portugal is performed every trimester in non-immune pregnant women, to maximize the diagnosis likelihood and to reduce the risk of those late sequelae. In this particular case, without preconception analytical results, we would suspect of an acute infection on the first trimester leading to additional anxiety during pregnancy and unnecessary further investigation with repeated ultrasounds and amniocentesis. There is evidence that positive toxoplasma IgM and low IgG avidity may persist for months and even years, which explain the serologic results on this patient. Thus, with the preconception and first trimester analytical results it was concluded the patient was infected by toxoplasma gondii before pregnancy and no further investigations were necessary.

## PO 63

### HIV INFECTION IN PREGNANCY – THE LAST 16 YEARS IN MADEIRA ISLAND'S OBSTETRIC POPULATION

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**Introduction:** For many women, pregnancy is the ultimate opportunistic moment for the diagnosis of HIV infection. The general use of antiretroviral therapy (ART) during pregnancy has reduced the HIV transmission rate from approximately 20 to 30 to <1% in developed countries, like Portugal.

**Goals:** To evaluate the prevalence of HIV infection in the obstetric population of Madeira Island and its characteristics, namely parity, maternal age, timing and management of HIV infection and their respective obstetric outcomes.

**Methods:** Retrospective descriptive study of pregnant women admitted to the Obstetrics Unit of the Dr. Nélio Mendonça Hospital (99% of deliveries in Madeira) with delivery between January 2003 – December 2018, with the diagnosis of HIV infection (prior to or during pregnancy). Clinical files were consulted in order to collect data on: sociodemographic characteristics, timing of infection, ART, obstetric data and newborn characteristics.

**Results:** Of the 35782 deliveries occurring between 2003 and 2018, 25 (less than 0,001%) occurred in pregnant women seropositive to HIV (92% VIH-1). At the time of delivery, the average maternal age was 29 years and the average gestational age was 36,6 weeks. About 68% of the population was multiparous. The majority (72% (18/25)) of deliveries occurred via C-section, only two of them for obstetrical reasons. ART was initiated in 44 % of cases on the first trimester, in 20% on the second and 16% of cases on the third trimester. Intrapartum management with ART was fulfilled in 21 cases (84%). We identified 5 cases of unsurveilled pregnancy and HIV diagnosis peripartum, in which ART was not performed during pregnancy. In 11 cases (44%) the viral load was unknown and in 13 cases (52%) was <1000 copies/mL. There were no cases of vertical transmission. 92% of newborns presented Apgar score at 5 minutes greater than 7. The average weight of the newborns was 2686 g, and 28% presented a <10th percentile. The prematurity rate was 32% (versus 6% in the general obstetric population).

**Conclusion:** The timely screening of HIV/AIDS in pregnancy prevents vertical transmission and influences pregnancy outcome, particularly the route of delivery. Seropositive women with viral load <1000 copies/mL, can safely have a vaginal birth, according to international guidelines. Therefore, we conclude that despite our high rate of intrapartum ART, it is important to reduce our C-section rate in HIV-infected mothers without obstetric indication.

## PO 66

### **DESFECHOS PRÉ-NATAIS ASSOCIADOS ÀS CARACTERÍSTICAS DE GESTANTES COM RISCO HABITUAL**

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**Introdução:** A atenção à saúde da mulher durante o pré-natal ainda é um desafio para as autoridades em saúde de todo o mundo, pois ainda percebe-se alto índice de morbimortalidade materna por causas obstétricas.

**Objetivo:** Associar as características sociodemográficas, obstétricas e clínicas das gestantes com risco habitual de um serviço de saúde escola com a utilização do pré-natal.

**Método:** Trata-se de um estudo avaliativo, foi realizado no período de maio de 2015 a janeiro de 2017 na Casa de Parto Natural Lígia Barros Costa, situada no bairro do Planalto do Pici, Fortaleza, Ceará, Brasil. A amostra totalizou 554 prontuários e 50 puérperas que realizaram o pré-natal na Casa de Parto Natural.

**Resultados:** Das características clínicas e obstétricas observa-se que as variáveis antecedentes familiares, intercorrência na gestação anterior e atual, número de gestações, paridade, aborto anterior, número de filhos apresentaram associações com significância estatística o início do pré-natal, número de consultas e realização dos exames complementares. Quanto aos antecedentes familiares, a avaliação estatística

evidenciou a existência de associação entre a variável história de antecedentes familiares com início do pré-natal ( $p=0,031$ ) e a realização dos exames complementares ( $p<0,001$ ). As gestantes sem intercorrência na gestação anterior apresentaram somente associação estatística com início tardio do pré-natal ( $p=0,004$ ). Observa-se ainda associação estatística com a variável número de consultas de pré-natal ( $p<0,001$ ).

**Discussão:** Pode-se inferir que sem antecedentes familiares de complicações tem 81% mais chance iniciar o pré-natal tardio e 51% de realizar inadequadamente os exames complementares. Gestantes sem complicações na gestação atual apresentam 2,33 vezes maior chance de não realizarem um número adequado de consultas de pré-natais. As mulheres multiparas possuem 48% maior chance de não realizar um número adequado de consultas de pré-natal e, 72% não iniciá-lo precocemente. Por meio da realização dos testes estatísticos, pode-se inferir que a ocorrência de parto anterior aumenta em 75% as chances de realizar o número de consultas inadequadamente, bem como acrescentam em até 2,35 vezes maior chance de início tardio do acompanhamento pré-natal.

**Conclusão:** Diante desse cenário, observa-se a não adesão às consultas pré-natais, bem como o início tardio destas configurando-se um sério problema para a saúde do binômio mãe/filho.

## PO 67

### **ADEQUAÇÃO DA ASSISTÊNCIA PRÉ-NATAL DE GESTANTES COM RISCO HABITUAL COM BASE NOS PROCEDIMENTOS CLÍNICOS OBSTÉTRICOS**

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**Introdução:** A assistência pré-natal deve ser prestada com qualidade e com foco nas necessidades das gestantes e famílias. Os profissionais deverão seguir os protocolos das últimas evidências científicas para nortear suas ações frente a essa assistência.

**Objetivo:** Avaliar a adequação da realização dos procedimentos clínicos obstétricos de uma clínica escola que realiza assistência pré-natal de risco habitual.

**Método:** Trata-se de um estudo avaliativo, sendo realizado no período de maio de 2015 a janeiro de 2017 em uma Casa de Parto Natural, situada em Fortaleza, Brasil. A amostra totalizou 554 prontuários e 50 puérperas que realizaram o pré-natal na Casa de Parto Natural. Considerou-se adequado os procedimentos clínicos obstétricos, em um pré-natal de seis consultas quando o profissional realizou cinco ou mais registros de altura uterina, idade gestacional, peso, aferição da pressão arterial e índice de massa corpórea (IMC) e quatro ou mais registros dos BCF e dois ou mais registros da apresentação fetal e edema.

**Resultados:** Verificou-se prevalência da frequência minimamente adequada, cinco ou mais registros, do cálculo da Idade Gestacional (IG) 353 (63,4%), da aferição da Pressão Arterial (PA) 345 (62,2%), da aferição da Altura Uterina (AU) 343 (61,5%), peso materno 340 (61,2%) e edema 517 (92,8%), quatro ou mais registros da ausculta dos BCF 392 (70,3%), duas ou mais e para o diagnóstico da apresentação fetal 510 (91,9%).

**Discussão:** A idade gestacional é um procedimento essencial para a avaliação do crescimento e bem-estar fetal, fornecendo parâmetros que indicam alterações do seu desenvolvimento saudável. O monitoramento da pressão arterial auxilia o diagnóstico precoce de situações de risco à saúde materna, como hipertensão gestacional, pré-eclâmpsia e eclâmpsia, e fetal, como retardo do crescimento intrauterino, prematuridade e baixo peso ao nascer. Quanto à aferição da altura uterina, esse procedimento é utilizado para avaliar o crescimento fetal, devendo ser realizado a partir da 12ª semana da gestação.

**Conclusão:** Conclui-se que há adequação da assistência pré-natal na maioria das consultas realizadas, pelos profissionais desse serviço.

## PO 68

### **TOXOPLASMOSIS IN PREGNANCY: EVALUATION OF PREGNANT WOMEN KNOWLEDGE IN THE ALGARVE REGION**

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**Introduction:** Toxoplasmosis is an infection caused by *Toxoplasma gondii*. It's currently considered the most common parasitic infection on the planet.

The overall rate of maternal-fetal transmission ranges from 30 to 40% and can lead to severe illness in the fetus.

**Goals:** Evaluate the knowledge of pregnant woman about transmission and preventive measures of toxoplasmosis.

**Methods:** A cross-sectional survey among pregnant women at the Centro Hospitalar Universitário do Algarve – Hospital of Faro is being performed (from September 2019). The TOWER study questionnaire was translated into Portuguese and used for data collection. The questions concerned personal data and toxoplasmosis knowledge.

**Results:** 45 pregnant women participated in the survey. The large majority (91.1%) is aware of toxoplasmosis.

According to 63.6% of women toxoplasmosis is a parasitic disease and 18.2% believe it's a viral disease. About the transmission route, 46.1% were convinced that it was transmitted by eating raw or undercooked meat and 31.6% pointed the domestic cat.

Half of the pregnant women surveyed are unaware of the symptoms associated with toxoplasmosis.

Regarding preventive measures, 30.8% of pregnant women refer avoiding consumption of raw meat, 28.8% avoiding contact with a litter box, 20.2% avoiding contact with cats and take care of personal hygiene.

88.9% of pregnant women believed toxoplasmosis might be dangerous during pregnancy and 64.4% consider that the infection could cause premature labor or miscarriage.

A total of 48.1% doesn't know about the possibility of developmental defects in children and 64.4% said that the first trimester of pregnancy was associated with the greatest fetal risk.

91.1% of pregnant women considered that more attention should be given to health education and 44.7% also said that physicians should pay more attention to women at risk.

No statistically significant association was found between sociodemographic characteristics and level of knowledge about Toxoplasmosis.

**Discussion/conclusions:** The pregnant women enquired demonstrated high basic knowledge about toxoplasmosis. Most of them knew it was a parasitic disease that could be associated

with premature birth or miscarriage.

However, there is still a significant gap in the knowledge of symptomatology and possible developmental defects caused by toxoplasmosis.

It's important to continue promoting this theme in our population, elaborating on consequences for pregnancy.

## PO 69

### NEONATAL HERPES SIMPLEX INFECTION AFTER VAGINAL TWINS DELIVERY – A CASE REPORT

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Neonatal infection with herpes simplex virus (HSV) occurs in 1 of 3200-10000 live births. It can cause serious morbi-mortality and permanent sequelae in many survivors. It accounts for a significant percentage of neonatal hospitalizations and in-hospital neonatal deaths. In the past, HSV-2 caused the majority of virologically confirmed genital HSV infections, but the prevalence has been increasing.

Neonatal HSV can be transmitted through intrauterine, perinatal, and postnatal contact. Most are acquired perinatally when HSV infection is present in the genital tract of the pregnant woman at the time of delivery. Most neonates with HSV disease are born to mothers without a history of HSV infection or other identifiable risk factors.

There are 3 types of neonatal disease, with different therapeutic and prognostic considerations: localized skin, eye, and mouth (which accounts for approximately 45% of neonatal HSV), central nervous system and disseminated disease.

A 26 year-old primigravid of bichorionic twins was admitted after preterm premature rupture of membranes at 31+1 weeks. Antenatal corticosteroid therapy and antibiotic prophylaxis were started and the babies were delivered vaginally two days later.

On his 7th day of life, the first twin presented

clustering vesicular lesions with an erythematous base on the face and torso. Treatment with acyclovir was started.

The mother didn't have a personal history of HSV infection nor did she have active lesions at the time of delivery. Maternal serology results after childbirth were suggestive of previous HSV-1 infection.

HSV DNA was detected on skin lesions and blood specimens. Lumbar puncture results were negative. Neuroimaging with magnetic resonance imaging and ultrasonography showed parenchymal brain hemorrhage. Ophthalmologic evaluation and electroencephalography were normal.

On day 10 he was diagnosed with necrotizing enterocolitis (NEC). The neonate presented a series of clinical episodes of NEC and late meningitis. The amount of infections raised the possibility of congenital immunodeficiency resulting from HSV infection - laboratory results are ongoing.

Neonatal HSV remains a clinical challenge - early manifestations may be subtle and nonspecific and can mimic other diseases. Early antiviral treatment improves survival and outcome, which depends upon the clinical pattern. HSV infection is lifelong,

## PO 70

### GROUP B STREPTOCOCCUS PRENATAL SCREENING AND NEONATAL EARLY-ONSET INFECTION RATES IN A SECONDARY-LEVEL HOSPITAL

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**Introduction:** Early-onset group B streptococcal (EOGBS) infection remains a significant cause for early infant morbidity and mortality. The major risk factor for EOGBS disease is maternal

colonization of the genitourinary and gastrointestinal tracts. 50% of women who are colonized with GBS will transmit the bacteria to their newborns. Universal prenatal screening and intrapartum antibiotic prophylaxis given to carrier mothers have been shown to unequivocally decrease early onset neonatal disease.

**Goals:** To describe the association between EO-GBS infection rates and maternal colonization in a secondary-level hospital from 2008 to 2018, and also to analyze the association between risk factors present in pregnant women and EOGBS disease.

**Methods:** A retrospective cohort chart review study included all EOGBS disease cases identified through microbiology lab records (blood, cerebrospinal fluid or urine) within the first 7 days of life in the hospital, from January 2008 to December 2018.

**Results:** Over 10 years, 6 EOGBS disease cases were identified (overall incidence, 0,29/1000 live births). The hemoculture was the most common positive microbiology lab test (83,3%, n=5). Median Apgar score at 5-minute was 9 and median birth weight was 3600 grams. Vaginal deliveries were observed in half of the cases. The majority are term newborns (83,3%, n=5). Mortality rate was 16,7% (n=1).

Median maternal age was 27 years old (range 23-33). Half of them was primigest and 66,7% (n=4) was nullipare. All underwent prenatal screening. It was performed in our hospital in 83,3% (n=5) of the cases and 50% (n=3), in due course. Positive screening in half of the cases, 33,3% of which having done antibiotic prophylaxis. In one-third of cases, intrapartum fever, chorioamnionitis and gestational age of less than 37 weeks were described. Very low birth weight, prolonged rupture of membranes, young maternal age, maternal GBS bacteriuria, and a previous newborn affected by EOGBS disease were not verified.

**Conclusions:** The maternal colonization stays

the major risk factor for EOGBS disease. In the last ten years, around 50% of the newborns with EOGBS were born from mothers who screened negative, which reflects limitations of current methods in the assessment of GBS.

Among screen-positive women, the antibiotic prophylaxis compliance was modest. Others risk factors, such as intraamniotic infection and gestational age under 37 weeks, were listed in one-third of the cases.

## PO 71

### OBSTETRIC PROPHYLAXIS TO NEONATAL STREPTOCOCCUS AGALACTIAE IN TWIN PREGNANCIES

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**Introduction:** Vaginal and rectal colonization by *Streptococcus agalactiae* during pregnancy is associated with potential neonatal complications, especially in preterm birth. Therefore, the universal screening is important in order to provide prophylaxis treatment and reduce neonatal mortality and morbidity. Twin pregnancy is a population at high risk to preterm delivery and therefore an effort to reduce neonatal infection is mandatory.

**Objective:** Determine the incidence and the efficacy of neonatal sepsis prophylaxis due to *Streptococcus agalactiae*, in a high-risk population to preterm birth – twin pregnancy.

**Methods:** Cohort study of women with twin pregnancy who delivered between 2003 and 2018 in a tertiary hospital. Maternal characteristics, Preterm Premature Rupture of Membranes (PPROM), gestational age at delivery, *Streptococcus agalactiae* colonization and neonatal sepsis were evaluated.

**Results:** A total of 1484 women were included, 876 (59%) cases of bichorionic twins and 608

(41%) cases monochorionic twins. There were 209 (14,1 %) cases of PPRM. Preterm deliveries occurred in 738 (49.7%) cases (0,7% between 24-27 weeks, 14.3% between 28-32 weeks and 27.9% between 33-35 weeks). Neonatal sepsis was diagnosed in 133 (4.5%) newborns, most of them related with prematurity. *Streptococcus agalactiae* was identified in 176 (11,8%) vaginal/rectal swabs. In this group, nine (2.6%) cases of neonatal sepsis occurred, with identification in blood culture of *Staphylococcus aureus* in 3 cases, *Pseudomonas aeruginosa* in one and *Klebsiella pneumoniae* in one. In the remaining cases, there was no microbial identification. *Streptococcus agalactiae* wasn't identified in any blood culture.

**Conclusions:** Neonatal sepsis to *Streptococcus agalactiae* is a rare condition even in this high-risk group, highlighting the efficacy of the established prophylaxis.

## PO 72

### IN VITRO ASSESSMENT OF LACTOBACILLI RECOVERY FROM PROBIOTIC PRODUCTS FOR VAGINAL APPLICATION

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**Introduction:** The interest of probiotics to treat and prevent vaginal infections is increasing, but little is known regarding the fate of the probiotic strains after rehydration in vaginal fluids.

**Goals:** To assess the in vitro recovery of lactobacilli from vaginal probiotic products commercially available, by studying the stability profile overtime of six different probiotic formulations in synthetic media and vaginal fluid simulants (VFS).

**Methods:** We used six formulations with mono species of probiotic formulations intended for vaginal application. One tablet/capsule of each was dispersed in three different solutions: Man Rogosa Sharpe broth (control); and two different solutions of vaginal fluid simulant: the classic preparation of vaginal fluid simulant of Owen and Katz (VFS -OK); and a modified solution of vaginal fluid simulant (MVFS) of Tomás and Nader-Maciás

Suspensions of dispersed products in MRS, VFS-OK and MVFS were incubated, and a serial 1:10 dilutions of the suspensions were performed (10<sup>-1</sup> to 10<sup>-6</sup>) immediately after suspension (0h) and after 6, 12, 24 and 48 hours of incubation. A drop of each dilution was then inoculated in MRS supplemented with agar and the plates were incubated for 48h under the same conditions. After incubation, the colony forming units (CFU) were counted. The procedure was repeated for each product in two independent experiments.

**Results:** Bacteria recovery from all products in MRS and MVFS was higher than what was claimed by the pharmaceutical companies, except for one product. In VFS-OK, an higher recovery was obtained for all products than claimed by the company.

Overall, the recovery of all probiotics decreased overtime and each probiotic product has a unique profile. MVFS solution had recovery patterns comparable to those obtained with standard culture medium.

**Discussion/Conclusions:** For the present purpose MVFS seems to better simulate the conditions of the human vaginal fluid. So it shall be used to predict the viability of probiotics overtime in the normal vaginal milieu and to select the most adequate strain to better survive in each specific clinical condition.

Each probiotic product has a unique profile which requires stand-alone studies in order to assess their preclinical effectiveness, and promote their differential use by the medical community.

## PO 73

### SEVERE FETAL ANEMIA SECONDARY TO PARVOVIRUS B19 INFECTION: A CASE REPORT OF SUSPECTED ALLOIMMUNIZATION

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**Introduction:** Fetal anemia is a dangerous condition. The most common etiology is red-blood-cell alloimmunization, followed by non-immune causes, particularly parvovirus B19 (PB19) infection. Nearly 65% of women of childbearing age are immune to PB19 and 1.5% of susceptible women will seroconvert during pregnancy. Anemia severity can be accurately predicted by middle cerebral artery peak systolic velocity (MCA-PSV).

**Goals and methods:** We report a clinical case of fetal anemia due to PB19 infection to alert for this condition as a differential diagnosis for severe fetal anemia.

**Results:** A 32 weeks pregnant woman, 36-year-old, G4P1 (2 first trimester miscarriages, 1 cesarean section), with blood type A Rh negative, went to our Obstetric Emergency Service by absence of fetal movements during 42hours. She had an otherwise uneventful pregnancy. Only one indirect Coombs test was performed during pregnancy, at 25 weeks, which was positive (anti-D antibody titer 1:4). Father's blood type was known to be Rh positive and alloimmunization prophylaxis was performed at 28 weeks. At admission, the cardiocotography showed a sustained sinusoidal fetal heart rate pattern, with no fetal movements nor uterine contractions. Ultrasound evaluation confirmed the absence of fetal movements, with normal amniotic fluid index, and revealed a MCA-PSV>1,5MoM. No fetal effusions were observed. An emergent

cesarian section was performed. The male newborn weighing 1580g, with an Apgar score of 4/6/7, required non-invasive ventilator support and erythrocyte transfusion at 10 minutes of live due to severe anemia (hemoglobin=3,60g/dL). The maternal blood analysis revealed an indirect Coombs test positive (anti-D antibody titer 1:32), negative Kleihauer test and positive PB19-specific IgM and IgG. The newborn had O Rh positive blood type, but a negative direct antiglobulin test and no signs of hemolysis. He had also thrombocytopenia, not requiring platelet transfusion, and was discharged after 41 days.

**Discussion:** As maternal PB19 infection is mainly asymptomatic, early identification of pregnancies at risk for fetal anemia may be missed. The overall risk of fetal infection is 17–33%, mostly asymptomatic. The risk of fetal complications, namely stillbirth, severe anemia or non-immune hydrops (NIH), is higher when women are infected during the 1st half of pregnancy. The overall survival rate is 58%–77%, but the prognosis is globally good after birth, particularly in fetus without NIH.

## PO 74

### GYNECOLOGIC CARE FOR WOMEN WITH HIV IN A TERTIARY CENTER – OUR POPULATION

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**Introduction:** Gynecological surveillance, including cervical cancer screening, is particularly important in women with human immunodeficiency virus (HIV), given the higher incidence of cervical cytologic abnormalities and fastest progression to cervical cancer.

Maternidade Dr. Alfredo da Costa, in Lisbon, created in 2015 a gynecology clinic for women with HIV.

**Goals:** To characterize the population of HIV-infected women followed in our gynecology clinic.

**Methods:** Retrospective study of women with

HIV referred to our hospital for gynecological follow-up from January 2015 to December 2018. Statistical analysis was performed using SPSS.

**Results:** We included 410 women, with a mean age at the first appointment of 45.7 years (minimum 19, maximum 90 years). Most women (83%) were multiparous, 58% had vaginal deliveries and 23% had at least one caesarean section; 57 women had a child with HIV. Most women (55%) were Portuguese, but 35% came from Portuguese-speaking African countries. Regarding education level, 8% was uneducated and only 22% had a high school diploma or higher education degree; 25% of the sample was unemployed. Most (68.1%) denied smoking habits. A significant percentage (59%) never used condoms, 37% did not use any contraceptive method and 20% had undergone female sterilisation. Most women (95%) had HIV-1 infection (14 cases of HIV 2, 5 cases of both HIV 1 and 2), with 80% of sexual transmission. Almost all women (96%) were on antiretroviral therapy, viral load was undetectable in 80%, and 88% had a CD4+ count  $\geq 250$  cells/mm<sup>3</sup>. About one third (32.5%) had at least one coinfection. Regarding cervical cancer screening, 57 women (14%) had never done a pap smear, but 47.3% of the sample had a recent one (less than 3 years old). Cervical cytology test was performed in 83% of the sample (n = 340), with normal results in 84% of women. Human papillomavirus (HPV) testing was made in 335 women, and 31.4% had high-risk genotypes.

**Conclusions:** After analysing the first four years of this clinic, we highlight the variety of cultural background, the low level of education and the high unemployment rate of our population. Most acquired the infection through sexual activity, but consistent condom use remains low. Despite the apparent control of HIV infection in most of these women, the prevalence of high-risk HPV is substantial, reinforcing the importance of regular gynecological follow-up in this vulnerable population.

## PO 75

### THE IMPACT OF HIV RELATED FACTORS ON HPV TESTING RESULTS

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**Introduction:** Women with human immunodeficiency virus (HIV) are more likely to get human papillomavirus (HPV) infection, in particular because HIV results in immune system impairment and both virus share a sexual transmission. Regular gynecological care of these women, at increased risk for dysplasia and cervical cancer, can be challenging but must be done.

**Goals:** To evaluate a group of women with HIV and correlate their background and virologic control with HPV test result.

**Methods:** Retrospective study of women with HIV referred to our hospital for gynecological follow-up and HPV testing, from January 2015 to December 2018 (n=335).

Data on demographics, habits, HIV mode of transmission, viral load (detectable vs. undetectable) and CD4 count (<250/mm<sup>3</sup> vs. ≥250/mm<sup>3</sup>) were analysed and correlated with HPV test results. Statistical analysis was performed using SPSSâ.

**Results:** The prevalence of a positive HPV test was 40.1% (n=134): 8.7% (n=29) low-risk HPV, 22.1% (n=74) high-risk HPV and 9.3% (n=31) both high and low-risk HPV.

In our sample we had 54.8% Portuguese women and 45.2% foreign; HPV test results were not statistically different in each group. The mean age was significantly lower in women with a positive HPV test (44.4 vs. 47.8 years, p=0.004), but similar in low vs. high-risk HPV groups. Age of first sexual intercourse did not influence HPV test result (positive vs. negative HPV and HPV low vs. high risk). Frequency of condom use, smoking habits, type of HIV (1 or 2), route of transmission, and the presence of other coinfection did not affect HPV test results.

Women with detectable viral load had more positive HPV tests (64.8% vs. 33.1%; p<0.001) and higher incidence of high-risk HPV (52.1% vs. 25.5%; p<0.001). Women with CD4 counts <250/mm<sup>3</sup> had more positive HPV tests (64.9% vs. 36.9%; p=0.001) and higher incidence of high risk HPV (48.6% vs. 29.4%; p=0.019). Use of antiretroviral therapy did not influence the results.

**Conclusions:** Our sample showed a significant prevalence of HPV infection, confirming the greater susceptibility of this population. This result appeared to be more influenced by laboratory control of HIV infection than by demographic characteristics and circumstances of exposure, which reinforces the importance of monitoring these women.

## PO 76

### HPV INFECTION AND CYTOLOGICAL ABNORMALITIES IN WOMEN WITH HIV – A RETROSPECTIVE STUDY IN A TERTIARY CENTER

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**Introduction:** Studies show that HPV infection is more common in women with HIV, especially because these viruses share sexual transmission and risk factors. These women also have higher risk of persistent HPV infection, increased susceptibility to multiple virus infection and a higher incidence of cytological abnormalities.

**Goals:** To assess which HPV genotypes are more common in women with HIV and whether there is a correlation between HPV type and cytological abnormalities.

**Methods:** Retrospective study of women with HIV referred to our hospital for gynecological follow-up and HPV testing, from January 2015 to December 2018 (n=335). The results of pap smear and HPV test were evaluated. Statistical analysis was performed using SPSSâ.

**Results:** The prevalence of a positive HPV test was 40.1% (n=134): low-risk HPV 8.7% (n=29), high-risk HPV 22.1% (n=74) and both low and high-risk HPV 9.3% (n=31). Pap smear was performed in 91.9% of the sample (n=308), with negative results in 84.4% (n = 206). Abnormal findings included: ASC-US 4.2% (n=13), LSIL 8.1% (n=25), HSIL 1.9% (n=6), ASC-H 0.6% (n=2) and AGC 0.6% (n=2).

The most frequent HPV genotype was 53, considered as possible high-risk HPV (n=22, 15.7% of total HPV positive, 6.3% of total sample), followed by HPV 16 (n=15, 11.2%), and HPV 31, 35 and 58 (12 cases each, 8.9%). No cervical dysplasia was observed in women with HPV 53. Most women with HPV 16 had a negative pap smear (n=7); 3 had LSIL, 3 had HSIL. HPV 18 was identified in 6 women, and 4 of them had a negative pap smear. Considering the group with potentially severe cytological abnormalities (HSIL, ASC-H, AGC, n=12), high-risk genotypes found were: 16 (n=3), 19, 31, 34, 35, 45, 53, 59, 70, 82. Sixteen women had at least three high-risk HPV types, presenting these cytological findings: negative (n=4), LSIL (n=9), ASC-US (n=1), ASC-H (n=1) and AGC (n=1).

**Conclusions:** This study confirmed that women with HIV are at higher risk of HPV infection, have a wide variety of genotypes and genotypes not as frequent, such as HPV 53. HPV types considered at higher risk for cervical cancer (16, 18) did not dominate the results or caused severe dysplasia in these women.

## PO 77

### HPV RELATED INVASIVE SQUAMOUS CELL CARCINOMA OF THE VULVA: CASE REPORT

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**Introduction:** Vulvar carcinoma is a rare neoplasm that accounts for 3-4% of female reproductive tract cancers. When associated to human

papillomavirus (HPV) infection it often occurs in younger women (50-60 years old). Inguinal and/or femoral node involvement is the most significant prognostic factor for survival in patients with vulvar cancer and reported five-year survival ranges from 90% for patients with negative nodes to 40% for those with positive nodes.

**Case report description:** A 40-year-old patient was referred to our institution due to prolonged history of pruritic vulvar condyloma. She had been previously given Imiquimod with no improvement of the lesions. The patient had no other medical history. Physical examination revealed an exophytic lesion with vascularized and pigmented areas, approximately 4cm in diameter, localized in the perineal area; vagina and cervix without any macroscopic lesions. Inguinal lymph nodes were not palpable. Excisional biopsy revealed invasive and in situ squamous cell carcinoma and vulvar keratosis. PAP smear was negative for intraepithelial lesions of malignancy. Chest-abdomen-pelvis CT was normal. Vulvar radical local excision and bilateral inguinofemoral lymphadenectomy were performed. Histology reported verrucous invasive squamous cell carcinoma with clear surgical margins associated to high-grade squamous intraepithelial lesion (HSIL); there was no signs of metastasis of the removed lymph nodes. According to FIGO the tumor was classified as IB. Postoperative surgical wound infection and dehiscence requiring readmission for intravenous antibiotic therapy. Currently the patient remains under surveillance in our institution.

**Discussion/conclusions:** This case reinforces that any lesions on the vulva that is not know to be benign or that does not respond to a defined course of empiric therapy warrants biopsy. Although rare, an increase in the number of cases of vulvar carcinoma is observed in younger women, which is attributed to the increasing rates of HPV infection. Early diagnosis is fundamental for better prognosis and surveillance after treatment is essential to detect relapses, which are more frequent in the first two years.

## PO 78

### CERVIX CONIZATION – A 24H FOLLOW-UP

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**Introduction:** Approximately 10-20 million cases of human papillomavirus (HPV) infection may be responsible for causing cervical intraepithelial neoplasia (CIN) or cervical carcinoma. Although 80% regress spontaneously, for a definitive diagnosis or treatment, detected cases require colposcopy and, at times, conization.

Conization of the cervix is defined as excision of a cone-shaped or cylindrical wedge from the cervix uteri that includes the transformation zone and all or a portion of the endocervical canal in an out-patient setting.

Medical advances have allowed adequate ambulatory surgical (AS) programs promoting a rational and cost-effective use of resources. Simultaneously, health care humanization and patient satisfaction is enhanced, in part by improving compatibility between recovery and family and social activity.

One of the tools used to evaluate the healthcare quality and safety is the 24-hour after-surgery phone call, to obtain information about the patient (clinical evolution, possible complications, degree of functional activity and immediate care satisfaction).

**Goals:** This study aims to identify postoperative complications in the first 24 hours after a cervix conization, to assess the degree of functional activity and to understand if the given information and prescribed analgesia were adequate.

**Methods:** A retrospective analysis of the data collected from the 24-hour phone call after a cervix conisation procedure in our AS Unit from 01/02/2018 to 31/08/2019 was conducted.

**Results:** 159 cervix conizations were performed. 11.9% did not answer the phone call. The most frequent complications were pain (n=80,

57%) and mild haemorrhage (n=15, 10,7%).

Most patients reported that the information provided (n=140, 100%) and prescribed analgesia (n=138, 98,6%) were satisfactory.

Regarding the degree of functional activity in the first 24 hours, most patients (n=84, 60%) reported no disability.

In the first 24 hours, 95,7% of the patients had no clinical concerns (n=134) although in 5 patients there was the need to perform a second phone-call and 1 patient was instructed to visit a healthcare unit.

**Conclusion:** Global patient satisfaction was high. In the first 24 hours most patients had no clinical concerns and the most frequent complications were minor (minor pain and mild haemorrhage), which supports the safety of the ambulatory approach for cervix conization. On the other hand, information provided, and analgesia prescribed were considered adequate by the patients.

## PO 79

### FUSOBACTERIUM NUCLEATUM ASSOCIATION WITH BILATERAL PYOSALPINX

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**Introduction:** Pelvic inflammatory disease (PID) refers to an infection of the upper genital tract structures in women. Microorganisms typically involved are those associated with cervical infections and also vaginal microflora. Fusobacterium species are part of normal flora of mucosal surfaces, but not a major part of the vaginal flora; therefore, are rarely associated with PID. We report an uncommon case of severe PID associated with Fusobacterium nucleatum, which was complicated with septic shock and septic pulmonary embolism.

**Goals and methods:** Report a clinical case of severe PID associated with Fusobacterium nucleatum.

**Results:** A 42-year old patient presented with a seven-day history of odynophagia, anorexia and shivers associated with progressively worsening right iliac fossa (RIF) pain since the previous day. Clinically, she had a tender abdomen with signs of peritoneal irritation and presented with subfebrile temperature. Her blood tests showed raised levels of inflammatory markers and abdominal ultrasound findings were suggestive of acute appendicitis. She was diagnosed with septic shock and a diagnostic laparoscopy was performed, which revealed the presence of pus in the pelvis, right paracolic recess and right subphrenic space; both fallopian tubes were dilated and draining pus by manipulation. An appendectomy and bilateral salpingectomy were performed, followed by irrigation of the peritoneal cavity. Generalized peritonitis due to bilateral pyosalpinx was diagnosed. The patient was admitted to the intensive care unit requiring vasopressor support and mechanical ventilation. After a period of 4 days of progressive improvement, the patient developed respiratory failure and general clinical worsening. The thoracic CT scan showed multifocal lung consolidation which were compatible with septic pulmonary embolization. The patient was managed with broad-spectrum antibiotics and discharged 27 days after the surgery. Microbiological examination of pus sample collected revealed the presence of *Fusobacterium nucleatum*.

**Discussion/Conclusions:** *Fusobacterium nucleatum* rarely associated with pelvic infection; in the case reported, has led to complicated PID with pyosalpinx, peritonitis and septic pulmonary embolization. The involvement of neighboring pelvic organs by the infection hinders differential diagnosis with other clinical entities as acute appendicitis, often being distinguished only intraoperatively.

## PO 80

### PERSISTENCE OF HSIL AFTER THREE EXCISIONS OF THE TRANSFORMATION ZONE IN A PATIENT HPV 16 POSITIVE

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**Introduction:** High-risk HPV infection is unequivocally associated with cervical cancer. Persistence of HSIL after excision of the transformation zone constitutes a medical challenge, particular in young patients with desire to preserve fertility.

**Goals and methods:** Report a clinical case of persistence of HSIL after three excisions of the transformation zone in a patient HPV 16 positive.

**Results:** We describe a clinical case of a 30-year-old nulligesta who was sent to our Cervical Pathology department due to a cervical cytology with LSIL. Her colposcopy showed evidence of an extensive acetowhite lesion. She underwent LASER CO2 vaporization of the cervix. In the next visit, even though the colposcopy did not show any lesions, the cytology was HSIL. Subsequently, a biopsy directed to the suspicious lesion was performed, which remained with HSIL and focal HPV. An excision of the transformation zone revealed HSIL (CIN 3) with incomplete excision. Six-months later, cervical cytology showed HSIL with a HPV 16 positive test. A new excision of the transformation zone was performed and revealed HSIL (CIN2) with negative surgical margins. In the subsequent visit, the patient maintained cytology HSIL with a HPV 16 positive test. She underwent another excision of the transformation zone with LSIL. Six months after she did not present cervical or vaginal lesions but showed recurrence of HSIL in the cytology with a HPV 16 positive test. She was sent to an oncology center, where the colposcopy showed no evidence of cervical lesions and one vaginal lesion which was biopsied. A new cytology and endocervical curettage showed HSIL with a HPV 16 positive test. The patient was proposed to a trachelectomy. The histopathology of surgery specimen revealed focal

HSIL with negative margins. The patient maintains medical surveillance in the hospital.

**Discussion/Conclusions:** Excision of the transformation zone is a diagnostic procedure with therapeutic potential, particularly when negative surgical margins are obtained. The persistence of HPV infection is a risk factor associated with recurrence of the cervical lesions and increased risk of progression to carcinoma.

## PO 81

### EARLY-ONSET GROUP B STREPTOCOCCAL DISEASE IN NEONATES BORN TO GROUP B STREPTOCOCCUS POSITIVE MOTHERS

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**Introduction:** Early-onset group B streptococcal disease (EOGBS) occurs in neonates (days 0-6) born to pregnant women who are recto-vaginally colonized with group B Streptococcus (GBS). Since 2002, according to the recommendation of world guidelines, universal screening for all pregnant women has been introduced. Intrapartur antibiotic prophylaxis has reduced the incidence of early-onset neonatal disease without a notable impact on the incidence of early and late-onset neonatal disease.

The aim of the study was to assess the effect of maternal screening for GBS and intrapartur antibiotic prophylaxis in preventing of early neonatal sepsis.

**Material and methods:** This retrospective cohort study enrolled all pregnant women in our hospital and their neonates with informed consent during the period of one year. We performed vaginal-rectal swab in pregnant women from 35-40 gestational week. Intrapartur antibiotic prophylaxis was administered to all women at risk. The antibiotic of choice is crystalline Penicillin, and in case of allergy alternative antibiotics are: Cephazolin, Clindamycin and Vancomycin.

**Results:** The screening covered 96% of pregnant women. 77.7 % of these, had a VR swab on admission to the maternity ward, while the others were taken at the admission. 22.15% of them were positive and 19% of them received a proper antibiotic prophylaxis. The incidence of early neonatal sepsis caused by GBS was 0.0 ‰,

**Conclusion:** Although GBS colonization among pregnant women was high, no cases of neonatal GBS have occurred after implementation of prevention guidelines.

**Keywords:** group B Streptococcus, neonatal sepsis, prophylaxis

## PO 82

### INFLUENZA VIRUS DISORDERS DURING PREGNANCY

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**Introduction:** Influenza virus disorders during pregnancy and postpartum are associated with complications such as hospitalization, preterm delivery, fetal or maternal death, especially during second and third trimesters. The American College of Obstetricians and Gynecologists and World Health Organization recommend all pregnant women be vaccinated during influenza season. The goal of vaccination is to prevent severe disease from influenza virus on the mother as well as protecting the newborn during the first months of life. Patients with suspected or confirmed influenza virus infection should start antiviral therapy regardless of vaccination status or type of influenza.

**Goals:** To investigate maternal and fetal outcomes, vaccine coverage as well as treatment of influenza among pregnant women that attended our emergency room.

**Methods:** Retrospective study of influenza cases detected in Maternidade Dr. Alfredo da Costa in Lisbon, from November 2017 to April

2019. Laboratory diagnostics was performed using a multiplex real time PCR for Influenza A (H3N2 and H1N1 pdm2009) and B. SPSS version 24 was used for statistics analysis.

**Results:** There were 63 women with diagnosis of influenza virus. Mean maternal age was 31 years, mean gestational age was 25 weeks, 6,3% were smokers and there was only one maternal respiratory disease (asthma). Influenza A was detected in 87,3% and B in 12,7% of women. Treatment with oseltamivir was performed in 82,5% of women. Maternal complications, we report 11,1% of preterm labour, hospitalization in 3,2% and bacterial pneumonia after influenza in 4,8%. As for fetal complications there were 9,5% cases of fetal growth restriction. In 57,1% no complications were detected two months after birth. Regarding vaccine coverage only 6,3% of women received vaccination. The main cause of not receiving the vaccine was lack of knowledge of its importance during pregnancy (95.5%) but in 4,5% it was the woman's choice. No statistically significance was found between maternal complications and influenza vaccination.

**Conclusions:** Health care professionals are aware of the importance of influenza screening and antiviral treatment in pregnant women but it seems that there is not enough awareness for vaccination. Despite maternal and fetal complications no statistically significance was detected probably due to the small sample of this study. We believe that it is important to further investigate influenza virus disorders in pregnancy.

## PO 83

### ASYMPTOMATIC BACTERIURIA AND SYMPTOMATIC URINARY TRACT INFECTIONS IN PREGNANCY – OBSTETRIC OUTCOMES

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**Introduction:** Symptomatic and asymptomatic bacteriuria are frequently encountered medical complications of pregnancy. Although most infections are asymptomatic, even covert bacteriuria places mother at risk and therefore screening and treatment of asymptomatic bacteriuria has become a standard of obstetrical care.

**Goals:** Our aim is to find the impact of symptomatic and asymptomatic urinary tract infections (utis) in obstetric outcomes.

**Methods:** Retrospective cohort study of 312 pregnant women with positive urine culture during a 5-year period. In this study we compared pregnant with asymptomatic bacteriuria and symptomatic UTIs with regard to the obstetric outcomes. For statistical analysis, SPSS® Statistics v23 was used.

**Results:** Of the 312 enrolled pregnant, 60,5% (n=214) have asymptomatic bacteriuria. The mean gestacional age at diagnoses was 21,5 weeks ( $\pm 9,5$ ) and there was no difference in groups.

Escherichia coli was the most common pathogen (55.5%) associated with both symptomatic and asymptomatic bacteriuria. Staphylococcus saprophyticus, Proteus mirabilis and Enterobacter aerogenes were more frequently associated with symptomatic bacteriuria ( $p=0.049$ ). Most widely used antibiotic in asymptomatic bacteriuria was fosfomicin (47.6%) and in symptomatic UITs was cephalosporin (40.3%).

Compared to asymptomatic bacteriuria group, the symptomatic UITs group presented a higher rate of associated pathologies such as kidney

disease (6.4% vs 5.9%,  $p=0.30$ ) and repetition UTIs (21.6% vs 13.4%,  $p=0.059$ ). Hemoglobin value at time of diagnoses were also lower in asymptomatic bacteriuria (12.1g/dL vs 13.2g/dL,  $p=0.35$ ).

Symptomatic UTIs group presented more complications like acute pyelonephritis (27.3% vs 1.9%,  $p<0,001$ ) and renal colic (0.6% vs 13.1%,  $p<0,001$ ) and asymptomatic bacteriuria group show a higher risk of preterm labour (7.8% vs 5.1%,  $p=0.75$ ), but in both the mean gestacional age at birth was 38 weeks.

**Conclusions:** Urinary tract infections during pregnancy are a common cause of serious maternal and perinatal morbidity. The symptomatic UTIs group presented a significantly higher rate of complications, such as acute pyelonephritis and renal colic. Preterm labour does not differ significantly between asymptomatic bacteriuria and symptomatic UTIs.

## PO 84

### NEONATAL SEPSIS FOLLOWING PRETERM PREMATURE RUPTURE OF MEMBRANES

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**Introduction:** PPROM complicates only 3-4.5% of pregnancies but is associated with 40% of preterm deliveries and can result in significant neonatal morbidity and mortality.<sup>1</sup> The risk for developing neonatal sepsis increases progressively with the time elapsed between rupture of membranes and eventual delivery.<sup>2</sup>

**Objective:** To determine the incidence of neonatal sepsis following preterm premature rupture of membranes (PPROM).

**Methods:** A retrospective descriptive study was performed using data from the Obstetric's and Pediatric's departments in a tertiary center – Centro Materno-Infantil do Norte (CMIN), from Jan 2018 to Sep 2019. All cases of PPROM in pregnancies between 23 0/7 and 34 0/7 weeks, which were admitted to the Obstetric's Care Unit

ward, were included in the study.

**Results:** Out of 38 neonates, 22 (58%) were female and 16 (42%) were male. There were 32 singleton pregnancies and 3 multiple pregnancies. Mean gestational age at membrane rupture was 29 weeks (range: 23-34 weeks) and at birth was 31 weeks (range: 24-38). Average duration of rupture of membranes was 12 days (range: 0-106 days). Seventeen percent of the PPROM cases had had a prior amniocentesis earlier in pregnancy. Most cases of PPROM were treated with a combination of azithromycin, ampicillin and amoxicillin, in seven cases azithromycin was not used and in one case azithromycin was the only antibiotic used. C-reactive protein was raised in 4 (11%) neonates. Positive antepartum urine cultures were found in 3 mothers (*Escherichia coli*, *Candida albicans*, *Klebsiella pneumonia*). Sepsis was suspected in 4 (11%) neonates on clinical grounds, but there were no confirmed cases of neonatal sepsis associated with PPROM. There were 3 cases of hospital-acquired sepsis: the most frequently detected microorganism in blood cultures was *Staphylococcus epidermidis* (2 cases), followed by Methicillin-resistant *Staphylococcus aureus* (MRSA) (1 case) and *Serratia marcescens* (1 case), with a mortality rate of 67%.

**Discussion:** Several studies have pointed out the benefits of replacing erythromycin with azithromycin in the management of PPROM.<sup>3</sup> Although the American College of Obstetricians and Gynecologists (ACOG) proposes a course of intravenous (IV) ampicillin and erythromycin for 48 hours, followed by oral amoxicillin,<sup>4</sup> in this study there were no cases of neonatal sepsis related to PPROM when erythromycin was substituted by azithromycin.

## PO 85

### HIV INFECTION AND GENITAL TRACT INFECTION SCREENING – 4 YEAR RESULTS

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**Introduction:** Women are more susceptible to sexual transmission of human immunodeficiency virus (HIV) infection due to female genital tract characteristics. The virus also causes genital mucosal changes that facilitate infection by other microorganisms. The prevalence of genital infection is higher in HIV infected women and ranges from 16,3 to 70%: Gardnerella vaginalis (35-53%), Candida species (3-28%), Trichomonas vaginalis (1-28%), Chlamydia trachomatis (4-11.1%), Mycoplasma genitalium (1.1-3.3%) and Neisseria gonorrhoeae (0-1.3%). Since 2015 a specific clinic was created to assure proper gynecological surveillance to HIV infected women.

**Goals:** Study the prevalence of genital tract infection in routine vaginal swab in women infected with HIV and compare our numbers with the literature.

**Methods:** Retrospective study of HIV infected women who attended a gynecology clinic in our institution from January 2015 to December 2018. Demographic characteristics, HIV related factors and vaginal swab results were collected from patient charts.

**Results:** During the 4-year period 410 women were assessed. Women's mean age was 45.7 years ( $\pm 11.5$ ), most were multiparous (83.4%), of fertile age (63.2%) and sexually active (68.1%). Regular use of condom was low (15.4%) and 31.5% smoked. The prevalence of HIV1 in our court was 95.4% and HIV2 was 3.4% and 97.6% were taking antiretroviral therapy. Viral load was undetectable in 80.2% and 87.2% had a CD4+ count  $\geq 250$  cells/mm<sup>3</sup>. Vaginal swab was performed in 361 (88.1%) wo-

men with at least one microorganism identified in 131 (36.3%) and for 2 or more in 19 (5.3%). Candida species was the most prevalent microorganism (n=52, 14.4%) - albicans (n=37, 10.2%), glabrata (n=5, 1.4%), tropicalis (n=3, 0.8%), krusei (n=2, 0.6%), parapilosis (n=2), guilliemondi (n=1) and nivariensis (n=1) - followed by Gardnerella vaginalis (n=47, 13%), Trichomonas vaginalis (n=20, 5.5%), Chlamydia trachomatis (n=13, 3.6%), Mycoplasma genitalium (n=9, 2.5%), Neisseria gonorrhoeae (n=3, 0.8%) and Actinomyces (n=2, 0.6%).

**Discussion/conclusions:** The prevalence of genital tract infections in our population was 36.3% in line with the literature, but candida was the most common infection and we had a lower prevalence of Gardnerella. Our data corroborate the importance of careful gynecological surveillance of these women and the need to screen for genital infection in this population.

## PO 85

### GENITAL TRACT INFECTION IN HIV INFECTED WOMEN – CORRELATION OF PERSONAL AND IMMUNOLOGICAL FACTORS

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**Introduction:** Women infected with human immunodeficiency virus (HIV) are known to be more susceptible and have a higher prevalence of sexually transmitted infections and vulvovaginitis. Several variables have been identified as risk factors for their development.

**Goals:** Evaluate the correlation of personal and HIV related factors in genital tract infection.

**Methods:** Retrospective study of women infected with HIV who attended a gynecological clinic in our institution from January 2015 to December 2018. Demographic characteristics, obstetric and gynecological background, HIV related factors and vaginal swab results were collected from patients' charts. Statistical analysis was

done using chi-square and t-tests, with a confidence interval of 95% and a p value <0.05.

**Results:** During the study period 410 women were assessed. Women's mean age was 45.7 years ( $\pm 11.5$ ), most were multiparous (83.4%), leucodermic (55.1%), of fertile age (63.2%) and sexually active (68.1%). Only 15.4% admitted regular use of condom, 31.7% had already had 5 or more sexual partners and 31.5% smoked. HIV1 prevalence was 95.4% and HIV2 was 3.4%, and only 2.4% were not on antiretroviral therapy. Viral load was detectable in 19.8% and 12.8% had a CD4+ count <250 cells/mm<sup>3</sup> (12.8%). The prevalence of vaginal tract infection was 36.3%.

Concerning personal factors, women of fertile age and sexually active had a higher risk of a genital tract infection, 16.2% and 13.2% respectively (OR=2.01, CI 1.3-3.3, p<0.01; OR 1.8, CI 1.0-3.4, p=0.04). Parity, ethnicity, smoking habits, number of sexual partners and condom use were not correlated with a higher prevalence of these infections.

When analyzing HIV related factors, only CD4+ count <250 cells/mm<sup>3</sup> was associated with a 23.2% increased risk of vaginal tract infection (OD 2.5, CI 1.3-5.1, p<0.01). Type of virus, detectable viral load and antiretroviral therapy were not associated with a positive vaginal swab.

**Discussion/conclusions:** Although our population is mostly using antiretroviral therapy and with undetectable viral load, the prevalence of genital tract infection remains high. Our study demonstrates that screening is especially important in women of fertile age, sexually active and with low CD4+ count. In our population condom use was not protective of this type of infection, probably due to its low rate of regular use.

## PO 86

### IS THERE ANY RELATIONSHIP BETWEEN GENITAL TRACT INFECTION AND PAP-SMEAR AND HPV RESULTS IN HIV INFECTED WOMEN?

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**Introduction:** Women infected with human immunodeficiency virus (HIV) are known to be at higher risk of getting a genital tract infection, abnormal pap-smear and human papilloma virus (HPV) cervical infection.

**Goals:** Correlate the presence of vaginal tract infection and positive pap-smear and HPV cervical infection in HIV infected women.

**Methods:** Retrospective study of women infected with HIV who attended a gynecological clinic in our institution from January 2015 to December 2018. Demographic characteristics, HIV related factors, pap-smear, HPV and vaginal swab results were collected from patients' charts. Statistical analysis was done using chi-square and t-tests, with a confidence interval of 95% and a p value <0.05.

**Results:** During the study period 410 women were assessed. Women's mean age was 45.7 years ( $\pm 11.5$ ), most were multiparous (83.4%) and leucodermic (55.1%). HIV1 prevalence was 95.4% and HIV2 was 3.4%. The prevalence of vaginal tract infection was 36.3%.

Pap-smear was performed in 341 (83.2%) women with a prevalence of 15.2% abnormal results: ASC-US (3.8%), LSIL (9.4%), HSIL (2.1%) and ASC-H (0.6%). An abnormal pap-smear result was associated with a 20.6% risk of detection of a genital tract infection (OD 2.3, CI 1.3-4.7, p<0.01). If the pap-smear result was >ASCUS this risk increased to 32.8% (OD 3.9, CI 1.7-9.1, p<0.01).

Screening for HPV cervical infection was performed in 330 (80.5%) women and results were:

negative (59.4%), high-risk (21.8%), low-risk (8.8%) and both (9.4%). In women HPV positive (high and/or low-risk), the risk of being diagnosed with a genital tract infection was 17.5% (OD 2.2, CI 1.3-3.9,  $p < 0.01$ ). High-risk HPV alone was also associated with a higher risk of genital tract infection but with not enough power to reach statistical significance ( $p = 0.14$ ).

When we combine abnormal pap-smear and HPV positive results the increased risk of a vaginal infection persists but with no statistical significance ( $p = 0.34$ ).

**Discussion/conclusions:** In HIV infected women, an abnormal pap-smear or a HPV cervical infection were associated with an increased risk of simultaneous presence of a genital tract infection. In this population it is especially important to perform a vaginal swab.

## PO 88

### SCREENING OF MYCOPLASMA HOMINIS AND UREAPLASMA UREALYTICUM INFECTIONS IN MULTIPLE PREGNANCY

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**Introduction:** Although most genital infections by *Mycoplasma hominis* (*M. hominis*) and *Ureaplasma urealyticum* (*U. urealyticum*) are asymptomatic, they are associated with an increased risk of adverse pregnancy outcomes, such as preterm birth (PB) and preterm premature rupture of membranes (PPROM). Since multiple pregnancy is itself related to an increased risk of PB, screening is recommended.

**Goal:** To study the performance of mycoplasma species infection screening on multiple pregnancy outcomes.

**Methods:** Retrospective study of 706 women with multiple pregnancy assisted at our department between 2007 and 2018. Vaginal swabs were collected from 444 asymptomatic pregnant women and tested for genital mycoplas-

mas (*M. hominis* and *U. urealyticum*). In 262 women it was not performed. Statistical analysis was performed using SPSS 22.0 ( $p < 0,05$ ).

**Results:** Of the 444 women screened, there was a total rate of genital mycoplasmas infection of 18,5% ( $n = 82$ ), with *M. hominis* detected in 8,5% ( $n = 7$ ) of the cases and *U. urealyticum* in 91,5% ( $n = 75$ ). There were no cases of mixed *U. hominis* and *M. urealyticum* infection, but the association between genital mycoplasmas and other agents was 17,1% ( $n = 14$ ). All cases were treated according to antimicrobial susceptibility tests.

The average age of the screened group was  $32,5 \pm 4,6$  years. The rate of mycoplasma infection was higher for women aged 15-20 (50,0%) and 21-29 years (25,7%). The lowest rate of infection was in the oldest group: 40-49 years (15,4%).

As for the incidence of adverse pregnancy outcomes, PB occurred in 44,1% ( $n = 196$ ) of the cases where screening was performed and in 77,1% ( $n = 202$ ) where it was not ( $p < 0,001$ ). PPRM was also more frequent in women that were not screened (26,7% [70] vs. 14% [62],  $p < 0,001$ ).

With regard to the screened group, PB occurred in 41,5% ( $n = 34$ ) of the cases where mycoplasma species infections were present and in 44,8% ( $n = 161$ ) were they were not ( $p = n.s$ ). There were also no significant differences in the incidence of PPRM between the two groups (13,4% [ $n = 11$ ] vs. 14,1% [51],  $p = n.s$ ).

**Conclusion:** As reported before, *U. urealyticum* infection was much more prevalent than *M. hominis*. The incidence of mycoplasma species infection tends to increase with younger ages. Compared to non-screened pregnant women, screening reduced PB and PPRM risk. Regarding adverse pregnancy outcomes, there were no significant differences between the infected and non-infected screened group, as treatment was performed in all cases.

## PO 89

### CLINICAL CASE: AN UNEXPECTED CHORIOAMNIONITIS

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**Introduction:** Chorioamnionitis is a rare complication in pregnancy and can complicate 1-13% of term childbirths. It is characterized by an acute inflammation of the membranes and chorion of the placenta, usually due to the rise of microorganisms at the time of the rupture of the membranes. There are several reported risk factors as nulliparity; membrane rupture and prolonged labor; epidural analgesia; group B streptococcal colonization; sexually transmitted genital infections; and vaginal colonization with ureaplasma.

**Objectives:** Describe a clinical case of unexpected postpartum chorioamnionitis, with microbiological study demonstrating uncommon microorganisms.

**Methods:** Retrospective description of a clinical case by consulting the clinical file.

**Results:** A 32-year-old woman, primipara, went to the emergency room with premature rupture of membranes and labor at 40 weeks of gestation. No relevant personal or family history. Pregnancy was monitored regularly from the first trimester, without complications. All clinical routine analysis and ultrasounds were uneventful. The patient underwent Streptococcus group B swab at 35 weeks, which was negative. Upon objective examination, the patient had a clear fluid discharge and a 3 cm dilation of the cervix. She was admitted in delivery room and 8 hours after admission a boy was born with 3235g and Apgar index of 9/10/10. During childbirth, there was a large amount of meconium liquid with a foul smell, and after childbirth, the mother's temperature was 38.6°C and her heartbeats were between 100 and 130 bpm. Due to

chorioamnionitis suspicion, analytical studies were performed, and double antibiotic therapy was initiated. The newborn went to the Intensive Care Unit for surveillance. The microbiological study of the placenta revealed the presence of *Fusobacterium nucleatum* and *Streptococcus galloyticus* spp *pasterianus*.

**Discussion:** This is a case of unexpected chorioamnionitis, since most of the risk factors were not present. Moreover, the bacteria found in the microbiological study are not the most commonly found. This clinical case shows that intrauterine *Fusobacterium nucleatum* infection plays a role in term pregnancies and further studies may be needed to assess the relationship between chorioamnionitis in term pregnancies and periodontal disease. *Streptococcus bovis* is strongly associated with colorectal carcinoma, which is an early marker for screening. So, more studies are needed.

## PO 90

### EARLY-ONSET SEPSIS IN PREGNANT WOMEN WITH PRETERM PREMATURE RUPTURE OF MEMBRANE

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**Introduction:** Preterm premature rupture of membranes (PPROM) accounts for 3% of pregnancies and about one third of preterm births. It can be associated with significant materno-fetal morbidity and mortality mainly due to prematurity and infectious complications like chorioamnionitis and sepsis.

**Goals:** We aimed to determine the frequency of early onset neonatal sepsis (EONS) and to describe the main associated risk factors for EONS following pregnant women with PPRM.

**Methods:** The authors conducted a retrospective cohort study evaluating pregnant women with PPRM before 34 weeks of gestation. In those cases, we offer expectant management till 34 weeks as inpatient care, in the absence of con-

traindications to continuing the pregnancy. All of them started prophylactic antibiotic and corticosteroids after 24w. The sample was divided in two groups: G1 – new-born without EONS and G2- new-born with EONS. Differences in pregnancy and neonatal outcomes were analysed and compared between the two groups.

**Results:** We studied 114 cases of pregnant women with PPROM before 34w, 98 cases (85,96%) corresponded to singleton pregnancies and 15 (13,2%) to twin pregnancies; G1= 98 (85,96%) and G2 n= 16 (14,04%). We had 8 cases of PPROM before 24w (5 in G1 vs. 3 in G2,  $p=0,08$ ). There were no statistical differences in maternal age, smoking habits, type of pregnancy, cervix length, previous PPROM and invasive fetal procedures during pregnancy. Median gestational age at delivery was significantly lower in G2 (27,76w vs 31,71w,  $p<0,01$ ). In G2, PPROM occurred more frequently before 30w (87,5% vs 39,8%  $p<0,01$ ) and there were more cases of anydramnios at PPROM diagnosis (6,1% vs. 25%,  $p<0,05$ ). Median latency period didn't differ significantly between the two groups and association with maternal chorioamnionitis wasn't statically significant (27,6% vs. 50%,  $p=0,07$ ). We didn't have access to placental histology in all the cases but in G2 there were more frequently reported histologic chorioamnionitis (14/36 vs. 7/8,  $p< 0,05$ ). The most frequently reported microorganism was E. Coli (6/16).

**Conclusions:** In our population the incidence of EONS was 14%. EONS was significantly associated with earlier gestational and anydramnios at PPROM. In our study extended latency period wasn't significantly associated with EONS which meets current literature that tell us that prolonged latency duration after PPROM does not worsen neonatal prognosis.

## PO 91

### CLINICAL CASE: ABOUT CYTOMEGALOVIRUS (CMV)

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**Introduction:** CMV infection during pregnancy is the main infectious cause for congenital malformations, psychomotor delay and deafness. Many countries do not recommend screening because a majority of fetuses will be healthy, there is no valid treatment and little is known about the fetal and neonatal prognosis.

**Objectives:** Describe two cases of maternal CMV infection with different clinical aspects and outcomes.

**Methods:** Retrospective description of two clinical cases by consulting the clinical files.

**Results:** The first case portrays a 19-week pregnant woman with analyses performed at 16 weeks which revealed positive CMV serology with weak avidity. She presented an obstetric ultrasound of that date which showed only a hyperechogenic fetal bowel. She repeated the ultrasound at 21 weeks which revealed fetal biometry at percentile 50 and maintained the intestinal hyperechogenicity, with no further changes. She underwent amniocentesis at this time which revealed positive PCR for CMV. She started taking Valacyclovir. The subsequent ultrasounds and analytical routines were normal. At 37 weeks a 3030g boy was born. He had CMV urine testing using the positive Shellvial method. So far he has shown no developmental repercussions.

The second case portrays a 17-week pregnant woman with a 15-week test which revealed positive CMV serology with weak avidity. She presented an obstetric ultrasound of that date, which showed renal, intestinal and choroid plexus hyperechogenicity, with adequate biometri-

cs. She repeated the ultrasound at 19 weeks where she maintained intestinal and choroid plexus hyperechogenicity, with echogenic reinforcement of the posterior ventricle wall and biometry at the percentile 5. The couple refused medical interruption of the pregnancy, and she started taking Valacyclovir. Amniocentesis was performed at 21 weeks which revealed negative PCR and culture for CMV. Magnetic resonance imaging was performed at 29 weeks which did not show gross malformative changes in the cerebral parenchyma and cerebellum. Subsequent ultrasound scans maintained cerebral (chandelier images) and hepatic microcalcifications compatible with fetal reaction to CMV infection. At 40 weeks a 3290g girl was born. She had negative plasma and urine PCR for PCR as well as negative Shellvial urine test. She does not have developmental repercussions.

**Discussion:** Most countries do not recommend screening for CMV. In fact, diagnosis is not always easy and there is no effective treatment to offer.

## PO 92

### BOAS PRÁTICAS DE ATENÇÃO AO PARTO E NASCIMENTO EM UMA MATERNIDADE PÚBLICA NO NORDESTE DO BRASIL

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**Introdução:** Tem-se como boas práticas de atenção ao parto e nascimento, a classificação das práticas comuns na condução ao parto normal, orientando para o que deve ou não deve ser realizado durante o processo de parto e nascimento. Portanto, a atuação da enfermeira obstetra é fundamental para que esses resultados sejam mais favoráveis para uma maternidade segura, mantendo a perspectiva de promoção da saúde integral, por meio de cuidados com menos procedimentos intervencionista e mais respeito à autonomia das mulheres.

**Objetivo:** Identificar a frequência de boas prá-

ticas na assistência ao parto normal, em uma maternidade pública no Nordeste brasileiro.

**Método:** Este trabalho configura-se com um estudo transversal, com abordagem quantitativa realizado em uma maternidade pública de referência na cidade de Juazeiro do Norte, estado do Ceará, no período de março a maio de 2019. A amostra foi composta por 202 puérperas internadas no alojamento conjunto da referida maternidade, no período de março a maio de 2019. Os dados foram coletados por meio de formulário contendo informações acerca das boas práticas de atenção ao parto e nascimento. O estudo foi aprovado pelo Comitê de Ética em Pesquisa da Universidade Regional do Cariri (URCA) sob o parecer nº 3.183.260. Os dados foram organizados e tabulados por meio do software Excel® versão 2013 e apresentados em tabelas.

**Resultados:** O estudo revelou que não houve preenchimento do partograma em 72,8% (147) dos partos. Quanto ao tipo de dieta ofertada, 77,2% (156) tiveram dieta líquida prescrita; 48% (97) fez uso de algum método não farmacológico para alívio da dor; o exercício 40,1% (81) foi o método não farmacológico para alívio da dor mais utilizado pelas puérperas. Todas as parturientes da pesquisa (100%/202) tiveram acompanhante de livre escolha durante o trabalho de parto; 17,3% (35) puderam ter liberdade de posição e movimento durante o trabalho de parto; 79,7% (161) tiveram contato pele a pele com o recém-nascido após o parto; 1,5% (3) amamentaram na sala de parto.

**Conclusão:** Os resultados identificam uma inadequada implementação das boas práticas de atenção ao parto e nascimento o que evidencia a necessidade de melhoria do cuidado obstétrico, se corresponsabilizando e assumindo as boas práticas como possibilidade de transformar, juntamente com o protagonismo das mulheres, o modelo obstétrico.

**Descritores:** Assistência ao parto, Parto humanizado, Assistência de enfermagem.

## PO 93

### INFLUENCE OF MENSTRUAL CUPS IN VAGINAL MICROBIOTA.

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**Introduction:** Menstrual cups are reusable flexible collectors adjustable to the body. Besides the economic and environmental advantages, it is possible that the use of menstrual cup influences modifications in vaginal microbiota.

**Goal:** To evaluate the influence of menstrual cups in vaginal microbiota of reproductive age women in comparison to sanitary pads and to determine its acceptance.

**Methods:** Prospective longitudinal study with undergraduate/graduate volunteers, whose method of menstrual management were sanitary pads. In the first three menstrual cycles, participants were instructed to use sanitary pads. In the three consecutive cycles, they were oriented to use the menstrual cup offered by the research group. A questionnaire was used to obtain gynecological background and sexual behavior. In the first and third follow-up visits, participants underwent complete gynecological examinations including vaginal microbiota evaluation, according to Nugent et al. (1991), Cybley & Cybley (1991) and Donders et al. (2002), onco-tic cytology, collection of endocervical samples for molecular diagnosis of Human Papillomavirus (HPV), Chlamydia trachomatis (CT) and Neisseria gonorrhoeae (NG), and research of Trichomonas vaginalis (TV) in Diamond's medium. At each visit, vaginal samples were collected for analysis of microbiota.

**Results:** This is preliminary data of an ongoing study. Until now 67 patients were included and

35 of them have completed 5 examinations. We compared the results between the second (sanitary pad) and fifth (menstrual cup) months of the study. The median age of the participants was 22 (20-26) years-old. The prevalence of HPV was 85% and C. trachomatis was 5%. None of the participants were infected by NG or TV. During sanitary pads usage, 19.4% of women presented altered vaginal microbiota, while 8.6% of them had vaginal dysbiosis while using menstrual cups. Patients with CT or altered vaginal microbiota were treated. Overall acceptance of menstrual cups so far is 80%.

**Discussion:** This is the first Brazilian study to evaluate how menstrual cups interfere in vaginal microbiota. Preliminary results show a tendency that menstrual cups may be beneficial not only to the environment and economically, but also to vaginal microbiota. The acceptance of the menstrual cup was high among the participants.

## PO 94

### HEPATITIS B IN PREGNANCY: A 10-YEAR RETROSPECTIVE

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**Introduction:** According to recent evidence, 3.61% of the world's population is chronically infected with Hepatitis B virus (HBV), with great heterogeneity in its geographical distribution. The prevention of vertical transmission is essential in decreasing the global burden of the disease, which has been increasing.

**Goals:** 1) To evaluate the prevalence of HBV infection, the type of delivery, parity, maternal age and concomitant infections in this obstetric population; 2) To describe the characteristics of the newborn (NB) and the incidence of vertical transmission.

**Methods:** Retrospective study of the obstetric population infected with hepatitis B virus (HBV) - defined by the presence of HBV surface antigen (HBsAg) - admitted to our Service between January/2008 and December/2017 (10 years).  $p < 0.05$  was considered significant. SPSS® version 25.0.

**Results:** 165 HBV-infected pregnant women were detected over the last ten years, corresponding to 0.81% of total deliveries (165/20323). The average maternal age was 30.8 years. Most (67.57%) of infected women are multiparous. There were 18 (10.17%) pre-term births. 69.75% (112/165) of deliveries occurred vaginally and 30.25% (53/165) by caesarean section, with no differences in the distribution of the type of delivery compared to women without infection. Most caesarean sections fall into Robson's groups 1, 4, 5 and 9 and only two are due to maternal infection with high viral load (group 1). The incidence of vertical transmission is 0.00%; we have not detected any newborn infected by HBV. Almost all newborns (99.66%) have Apgar score at 5'  $> 7$  and 22.09% are small for gestational age ( $P < 10$ ). The majority of pregnancies were monitored in the National Health System. 12.72% are drug addicts, 21.21% are co-infected with hepatitis C virus ( $p < 0.0001$ ) and 3.63% with human immunodeficiency virus; 1.82% have a diagnosis of syphilis.

**Conclusion:** Maternal screening, antiviral therapy during pregnancy, universal immunoprophylaxis, and post-vaccination serological control are the essential components to prevent vertical transmission.

## PO 95

### INFECTION BY CYTOMEGALOVIRUS DURING PREGNANCY: REALITY OVER THE LAST 21 YEARS IN A TERTIARY HOSPITAL

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**Introduction:** Cytomegalovirus (CMV) is the most common congenital viral infection, with estimated birth prevalence of 0,48-1,3%. It becomes latent after a primary infection and can be reactivated with renewed viral shedding. Both asymptomatic and symptomatic newborns are at risk of developing long-term neurodevelopment morbidity, particularly deafness.

**Goals:** To evaluate the incidence of CMV in pregnant women monitored by the Health Service of the Autonomous Region of Madeira (RAM) and to determine the risks/complications associated with the infection.

**Methods:** Retrospective study of the obstetric population of the Health Service of RAM with the diagnosis of CMV infection during pregnancy, from 1998 to 2018(21 years).

**Results:** 30 cases of women with CMV infection have been detected during pregnancy (defined by the presence of positive CMV-specific immunoglobulin G (IgG) with low anti-CMV IgG avidity).

The average maternal age was 30.1 years and 60% of these women are nulliparous. Almost all (96.67%) of the pregnant women were asymptomatic.

93.33% of cases were diagnosed in the 1st trimester of pregnancy, with only 2 cases diagnosed in the 3rd trimester. Ultrasound anomalies include bilateral pyelic dilatation and placentomegaly. The amniocentesis identified 2 cases of fetal infection and revealed the presence of normal fetal karyotype whenever it was performed. There was 1 case of concomitant hepatitis B

virus infection and another case of acquired human immunodeficiency virus infection.

70% (21/30) of the deliveries occurred vaginally and 30% (9/30) by caesarean section. Only one of the caesarean sections performed was classified in group 1. Most (83.33%) of the women fall into Robson's groups 1, 2, 3 and 4.

The average gestational age at delivery was 38.7 weeks; there were 3 premature newborns, one of whom was diagnosed with fetal growth restriction.

The vertical transmission rate of CMV was 6.67%. There were two cases of congenital CMV infection: in one case, a medical termination of pregnancy was performed; the other case occurred in the context of a bichorionic/biamniotic twin pregnancy with a healthy second twin. All other newborns are apparently healthy. The average birth weight was 3182g and Apgar Index at 1' and 5' was above 7 in almost all cases (96.67%).

**Conclusion:** There is no treatment proven to be effective for prevention of fetal disease or reduction in risk of sequelae. Measures to prevent CMV infection during pregnancy are based on good personal hygiene.

## PO 96

### IS THERE ANY DIFFERENCE BETWEEN ACUTE CYSTITIS AND ASYMPTOMATIC BACTERIURIA DURING PREGNANCY IN PERINATAL OUTCOMES?

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**Introduction:** Urinary tract infections (UTIs) are common in pregnancy and continue to be a clinical problem and a challenge for physicians. Asymptomatic bacteriuria (ASB) occurs in 2-7% and acute cystitis (AC) approximately in 1-2% of all pregnancies.

**Aim:** Compare maternal and perinatal outcomes of women with acute cystitis and ASB in pregnancy.

**Methods:** Retrospective cohort study of pregnant women with positive urine culture whose delivery occurred in our institution, during a 5-year period (2013-2017). ASB was considered when urine culture had  $\geq 10^5$  colony-forming units (cfu)/mL of one type of bacteria; Acute cystitis was considered in the presence of irritative urinary symptoms and urine culture shows  $\geq 10^3$  cfu/mL of one type of bacteria. Statistical analysis performed with SPSS® Statistics v22.

**Results:** Of the 215 pregnant women included in the study, 149 had ASB (69,3%) and 66 presented AC (30,7%). The average maternal age at diagnosis was 30,46 years ( $\pm 6,70$ ) in ASB and 29,20 ( $\pm 6,82$ ) in AC group ( $p=0,20$ ). Recurrent UTIs occurred in 19,7% of the pregnancies in AC group. The prevalence of gestational diabetes was higher in the ASB group (5,4%). In the AC group most of diagnoses were made in the second trimester of pregnancy, but in the ASB most of diagnosis were made in the first trimester ( $p=0,09$ ). In both groups the most prevalent microorganism was *Escherichia Coli* and also in both groups Fosfomycin was the main prescribed antibiotic. About 7,9% of the ASB group did not perform the prescribed treatment. 65,6% of the pregnancies did control urine culture after antibiotic therapy which 8,4% were positive again. Comparing to ASB group, AC had less rate of preterm labor (11,4% vs 7,6%,  $p=0,39$ ), but had higher rate of dystocic deliveries (51,1% vs. 63,5%  $p=0,10$ ) and neonatal intensive care admission (10,1% vs. 12,9%,  $p=0,35$ ). The average weight of the term newborns was 3159g ( $\pm 431$ ) in the AC group and 3316g ( $\pm 378$ ) in the ASB group ( $p=0,02$ ). There were no low birth weight newborns in the study population.

**Conclusion:** The most common urinary tract in-

fections in pregnancy are asymptomatic. There is still a large rate of women who don't perform a urine culture control. Women with acute cystitis have newborns with average weight slightly lower comparing to asymptomatic bacteriuria, however in relation to other perinatal outcomes the difference is not significant.

## PO 97

### VULVAR CANCER: POSTOPERATIVE COMPLICATIONS OF SIMPLE VULVECTOMY VERSUS RECONSTRUCTIVE APPROACH

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**Introduction:** Vulvar cancer (VC) is a rare malignancy. Surgery is the chosen therapeutical approach for restricted vulvar lesions with or without reconstruction, depending on factors such as size of the tumor, prior surgeries or radiation and co-morbidities of the patient.

**Goals:** To evaluate infectious complications associated with primary closure procedure compared with reconstruction approach in VC.

**Methods:** Retrospective review of clinical databases of patients with vulvar cancer submitted to vulvar excision with or without reconstructive approach from 2015 to 2019 in a Gynecological Department.

**Results:** From a total of 24 patients 54.2% (n=13) underwent a reconstructive procedure. The groups were similar in terms of age and ethnicity. There were no significant differences regarding medical co-morbidities, such as BMI, diabetes, hypertension or dyslipidemia. They were also similar in prior surgeries (partial vulvectomy). However only the reconstructive group included patients submitted to neoadjuvant radiotherapy 38.5% (n=5).

The most frequent prophylactic antibiotherapy scheme was cefoxitine administered for 48

hours. There were no statistically significant differences in relation to size of the lesion at the time of the surgery. In the reconstruction group the median of the lesions was 4 cm IQR 2,5 vs 2,8 cm IQR 3 (p=0,152).

The reconstructive procedures had longer operative times (300 min IQR 195 vs 60 min IQR 105) p< 0.01 and these patients stayed bedridden in absolute rest for ten days.

There were statistically significant differences in postoperative complication rates between the two groups (p<0.01). The reconstruction group showed the highest rate of suture infection (11 cases vs 2 cases) and urinary tract infection (3 vs 0). The isolated microorganisms (urine or wound exudate culture) were mostly *Pseudomonas aeruginosa*, *Proteus mirabilis* and *Escherichia coli*. Postoperative antibiotherapy was used in 11 cases of the reconstruction group vs 2 cases in the vulvectomy-only group.

**Discussion/Conclusions:** Patients with VC submitted to reconstructive surgical techniques showed an increased risk for postoperative infectious complications compared with those undergoing excision alone.

## PO 98

### INFECTIONS AND PRETERM LABOR – EXPERIENCE FROM A TERTIARY CENTER

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**Introduction:** Preterm birth (PTB) is defined as delivery before 37 weeks of gestation, occurring in about 5-18% of births worldwide. The majority of PTBs are spontaneous, 40-50% due to preterm labor (PTL). There might be multiple etiologies which makes the prediction and prevention of PTL a challenging diagnosis. Some studies have reported an association between urogenital infection and PTL.

**Goals:** To analyze the prevalence and type of microorganisms associated with urogenital infections/colonization in women with hospital

stay due to uterine contractions and short cervical length.

**Methodology:** Retrospective analysis of data using clinical records of 87 women with hospital stay due to uterine contractions and short cervical and subsequent statistical analysis (SPSS v25).

**Results:** A total of 87 women were considered, whose mean of age was  $31,5 \pm 5,5$  [18-44] years and mean gestational age was  $31,0 \pm 3,8$  [23-36] weeks; among these, 16/87 had a previous PTB. Mean cervical length was  $16,6 \pm 6,8$  [0-25] mm. Upon diagnosis, analytically, they had  $11892 \pm 3029$  [3300-19900]/mm<sup>3</sup> leukocytes and C reactive protein (CPR) of  $0,8 \pm 1,1$  [0,02-6,8] mg/dL. Among these women, 31/87 had effectively delivered before term.

Urine culture and vaginal swab were performed in 66/87 and 38/87 of them, respectively. Urine culture was positive in 5/66 and negative in 61/66 women. Vaginal swab was positive in 15/66 and negative in 23/66 women. Both microbiological exams were negative in 20/87, although 8/20 women delivered preterm.

There were 25/87 women with one documented urogenital infection: 5/25 positive urine culture, 5/25 vulvovaginitis and 15/25 positive vaginal swab. Among these, 7/25 had a preterm birth. *Ureaplasma urealyticum* was the microorganism most frequently isolated in vaginal swab (12/15).

**Conclusion:** The prevalence of urinary tract infection/colonization was low in our population. In fact 61/66 women had negative urine cultures but 24/61 women delivered preterm.

The vaginal swab was positive in 15/38 with the most common isolated microorganism being *Ureaplasma urealyticum*. Among these women only 3/15 had a preterm birth.

## PO 99

### A CASE OF SEPTIC SHOCK WITH MULTIORGAN DYSFUNCTION DUE TO UNKNOWN PREGNANCY

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**Introduction:** Chorioamnionitis refers to acute inflammation of the chorion, amnion, and placenta, often in context of upward polymicrobial infection in membrane rupture scenario. When premature rupture of membranes (PROM) is managed expectantly the administration of prophylactic antibiotics reduces the risk of maternal and neonatal infections.

Sepsis is a systemic response to infection with severe form of clinic presentation is called septic shock that includes hypotension, lactic acidosis, oliguria and central nervous system alterations. This is a major cause for admission to intensive care unit (ICU) as well as maternal death.

**Goals:** To describe a case of septic shock after PROM

**Methodology:** Clinical files review.

**Description of the case:** A 33-year-old healthy woman was admitted to the emergency room with fever, anorexia and abdominal distention. She was tachycardic and hypotensive. Analytically she had high lactate, pancytopenia, elevated c-reactive protein and elevated liver enzymes. Although denying pregnancy, she referred amenorrhea and foul smell vaginal discharge. Abdominal ultrasound revealed a gravid uterus, and a live foetus with 30 weeks compatible biometry and oligoamnios. Due to the infectious context a caesarean section was performed. A 1570g boy was born with APGAR 7/6/7.

After the caesarean she was admitted to the ICU with septic shock and multiorgan dysfunction. Broad spectrum antibiotics were administered.

On the second day the clinical status deteriorated with persisting fever despite therapy. Urine and blood cultures were negative. A second sur-

gical approach was decided in multidisciplinary team briefing. During surgery a large volume of ascites and a small amount of purulent fluid were found. Total hysterectomy with bilateral salpingectomy was performed. The immediate post-operative was complicated with hemoperitoneum, presumed from consume coagulopathy and pelvic packing with a vacuum laparostomy device was locally assembled. Hospital stay was prolonged for 2 months with complete recovery.

**Conclusion:** This case reflects the potential importance of antibiotic therapy in prolonged rupture of membranes. Without appropriate therapy evolution can be rapidly and critically dangerous. Complex clinical situations should be managed in a multidisciplinary approach.

## PO 100

### URINARY TRACT INFECTIONS IN PREGNANCY – AGENTS AND MICROBIOLOGICAL RESISTANCE

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**Introduction:** Urinary tract infections (UTI) in pregnancy are frequent and associated with worse maternal and fetal outcomes. Asymptomatic bacteriuria (ABU) is the most frequent (2-7%) clinical entity and it can progress to symptomatic infection if untreated (30%). Acute cystitis (1-2%) is diagnosed based on lower urinary tract symptoms and isolation of 10<sup>3</sup> cfu/mL bacterial colonies. The incidence of pyelonephritis in pregnancy (0.5-2%) is higher than in general population, as a result of physiologic changes that occur during this time. The microbial agents identified during UTI in pregnancy are theoretically the same in non-pregnant women with *Escherichia coli* (*Ecoli*) the predominant uropathogen (70%).

**Objective:** Identify the most common microbial agents of urine cultures of pregnancy with concern of their antibiotic resistance and sensitivity.  
**Methods:** Retrospective study of all the urine posi-

tive cultures obtained in a 4 year period in the obstetrics outpatient clinic of a tertiary care hospital.

**Results:** The number of urine cultures enrolled was 355, with 60.3% of ABU. Almost 10% of the symptomatic UTI were pyelonephritis. *Ecoli* was isolated in 55.5% of cases, *Streptococcus agalactiae* was present in 20.0%, *Klebsiella pneumoniae* in 7.6%, and in 5.5% *Enterococcus faecalis*. Fosfomycin was the most common antibiotic prescribed, used for 43.9% of ABU and cystitis. In pyelonephritis cephalosporins were used in 82.4%. In 11.3% of cases a positive control urine cultures was observed. According to disk diffusion tests the global resistance profile was: ampicillin 18.9%, cotrimoxazole 7.9%, cefuroxime 4.8%, amoxicillin+clavulanate 4.2% and fosfomycin 3.1%.

**Conclusion:** As reported for non-pregnant woman the most frequent agent was *Ecoli*. The most used antibiotic in this population was fosfomycin. According to our study cefuroxime was a good first-line agent for empiric treatment but we found that the most used agent wasn't routinely tested. Screening and treating this entities remains the best standard of obstetrical care.

## PO 101

### SEPSIS WITH MULTIORGAN DYSFUNCTION: A RARE BUT CHALLENGING CONDITION IN THE POSTPARTUM PERIOD

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**Introduction:** Besides being a rare event, puerperal sepsis remains responsible for 15% of all maternal deaths. Sepsis is defined as life threatening organ dysfunction caused by a deregulated host response to infection. The most common site of puerperal sepsis is the genital tract. Nulliparity and black race have been identified as risk factors for pregnancy associated sepsis in addition to cesarean delivery and assisted reproductive technologies. The majority of maternal deaths due to sepsis were most often

to a delay in recognition or management on the obstetric care unit.

We report a case of a sepsis with multiorgan dysfunction, mainly myocardial with the purpose of widen our expertise in this rare but challenging condition.

**Case report:** We report a case of 37 years old, black race woman, with medical history of infertility, 36 weeks pregnant by in vitro fertilization (IVF) that presented at the obstetrical emergency department with 3 hours preterm premature rupture of membranes. Her antenatal course had been uncomplicated and she delivered by cesarean section, after failure of induction of labor. 26 hours after delivery she presented with fever and empirical antibiotherapy with ampicillin and gentamicin was started. 36h after delivery she presented with tachycardia, tachypnea, elevation of inflammatory and myocardial markers and metabolic acidosis. A thoracic CT showed bilateral pleural effusion, and on echocardiogram a small pericardial effusion without ventricular dysfunction was found. During hospitalization, the patient's clinical status deteriorated and she was transferred to the intermediate care unit where she stayed for 5 days. Blood cultures grew *Escherichia coli* and the diagnosis of sepsis was established and a septic cardiomyopathy was assumed. On postpartum day 14, patient signed her discharge against medical agreement. She was clinically and analytically optimized. An appointment with cardiology was made before discharge.

**Discussion:** Sepsis is an important preventable cause of maternal death. Physiological changes during pregnancy and puerperium can obscure signs and symptoms of sepsis and current definitions and guidelines for sepsis are not adapted to this period. Therefore, it is of utmost importance to have a high level of suspicion to recognize this condition and prevent a disastrous outcome. A multi-disciplinary group of clinicians with experience in obstetric care is essential to better manage these patients and their complications

## PO 102

### LACTOBACILLUS CRISPATUS AS THE ETIOLOGICAL AGENT IN CYTOLYTIC VAGINOSIS

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**Introduction:** *Lactobacillus* spp. dominate the vaginal niche but can also be involved in other vaginal dysbiosis, such as cytolytic vaginosis (CV), which remains poorly studied. It is characterized by a cryptic symptomatology, that often confounds the clinic.

**Goals:** The aim of this work was to search for the etiological agent of CV, by studying the vaginal microbiome and metabolomics of women afflicted with this disease and compare it with women with other clinical diagnostic.

**Methods:** Twenty-one vaginal washes have been collected from women attending a gynaecology consultation of a private clinic. The samples were categorized according with clinical diagnosis at the time of sampling (CV, 11; vulvovaginal candidosis, 8; Healthy, 2). The distribution of bacterial species, and their prevalence was assessed by next-generation sequencing of the 16S V4 region. In addition, total lactate D-lactic acid and L-lactic acid was quantified in all washes by a commercial kit, as well as lactate dehydrogenase (LDH) activity.

**Results:** *L. crispatus* was dominant (>70%) in all CV samples. Lactate was increased in CV in comparison with other cases. The presence of D-lactic acid isomer was associated with presence of *L. crispatus*. LDH activity was increa-

sed in vaginal washes that tested positive for the presence of *L. crispatus*, however no direct association was found with CV cases.

**Discussion/Conclusions:** The microbiome of women afflicted with CV was dominated in all cases by *L. crispatus*, contrarily with the results obtained for women diagnosed with other clinical symptomatology. In addition, the finding that an increase in D-lactic acid is associated with CV patients can be related to the role of *L. crispatus* in CV. The determination of LDH activity did not correlate exclusively with CV cases. On the other hand, D-lactic acid and total lactate quantification could be used as a valuable biomarker to diagnose this cryptic vaginal infection.

### PO 103

#### **COINFECTION OF BACTERIAL ENDOCERVICITIS AND HUMAN PAPILLOMAVIRUS (HPV) IN WOMEN OF REPRODUCTIVE AGE**

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**Introduction:** The Human Papillomavirus (HPV) is one of the most prevailing sexually transmitted infections worldwide. Recent studies investigated the relationship between HPV and vaginal/ endocervical bacteria, including *Mycoplasma* spp., *Chlamydia trachomatis*, *Ureaplasma urealyticum* and found that HPV was associated with these bacterial species. However, few studies have evaluated the coinfection between asymptomatic bacterial sexually transmitted infections (STI) and HPV in women of reproductive age.

**Goals:** To evaluate the coinfection rate between bacterial STI and HPV infection among reproductive-age women.

**Methods:** During the physical exam for routine pap-smear screening, additional vaginal sam-

ples were taken to classify vaginal microbiota by microscopy, according to Nugent et al. (1991), Cibley & Cibley (1991) and Donders et al. (2002). Endocervical secretion samples were collected for assessing the presence of infection by HPV, *C. trachomatis* (CT) and *Neisseria gonorrhoeae* (NG). For HPV testing we used the AmpliLute Liquid Media Extraction DNA Kit (Roche), then amplified a region of the L1 gene. The Linear array HPV genotyping kit (Roche) was used to differentiate the HPV types. CT was screened by PCR and NG by a duplex Real time PCR.

**Results:** Our cohort included 530 HPV-positive women from a previous study. The median age was 29 years-old (23–35), 52.8% did not use condoms, 78.8% were not smokers and the median number of partners was 3 (2 – 5). The prevalence of coinfection with CT or NG was 13.7% and 1.3%, respectively. A total of 41.7% of women had more than one type of HPV and 5.2% presented Low-grade Squamous Intraepithelial Lesions (LSIL). Overall vaginal dysbiosis was 46% - 76.1% of those had bacterial vaginosis. Altered vaginal microbiota was associated with having CT ( $p < 0.0001$ ) or high-risk HPV ( $p = 0.0002$ ).

**Discussion/Conclusion:** A thorough assessment is crucial to provide a better comprehension of STIs in the presence of HPV. We observed that altered vaginal flora is associated with the presence of CT and HR HPV-types. This reinforces the importance of maintaining a dominated Lactobacilli vaginal microbiota to protect against the acquisition of STIs, especially in HPV-infected women.

### PO 104

#### **INFECTIOUS COMPLICATIONS AFTER BREAST CANCER SURGERY IN A TERTIARY CARE HOSPITAL**

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**Introduction:** Postoperative infections continue to be a challenging problem, with an incidence

between 5 to 30% in most publications. When a surgical site infection (SSI) occurs, it can impact patient recovery and increase hospital stay. Perioperative antibiotics have been used to decrease the rate of SSI in breast surgery.

**Goals:** Evaluation of the patients diagnosed with postoperative wound infection, haematoma or seroma after breast cancer surgery. The treatment strategies and the outcomes were also assessed.

**Methods:** A retrospective records analysis was performed for 270 patients underwent elective breast cancer surgery as simple mastectomy, modified radical mastectomy or breast conserving surgery, from January through September 2019.

The SPSS v. 23 was used for the statistical analysis.

**Results:** Our study included 35% (n= 95) modified radical or total mastectomies and 65% (n= 175) breast conservative surgeries. In 7% of cases a SSI occurred, mostly after mastectomies and other complications as seromas, and in patients with neoadjuvant treatment. A significant risk factor was reconstructive breast surgery and the most commonly isolated species was *Staphylococcus aureus*.

Antibiotic treatment (mostly sulfamethoxazole trimethoprim and cephalosporins) was given to every patient with very good response, and some cases needed surgical drainage. The average hospitalization was prolonged up to 22 days due to these complications.

**Conclusions:** Despite the small percentage of infections, it can have a huge burden in the patient recovery. If the clinical and social situation is stable, we encourage the early hospital discharge and the clinical evaluation in outpatient setting to decrease the risk of infection.

## PO 105

### HEPATITIS B VIRUS INFECTION: PREVENTION OF MOTHER-TO CHILD TRANSMISSION

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**Introduction:** Universal screening for hepatitis B in pregnant women in the first trimester of pregnancy substantially reduces transmission to babies, thereby preventing future development of chronic hepatitis B infection. There is also evidence that treating infants at birth with HBIG in addition to routine hepatitis B vaccination is effective in preventing infection.

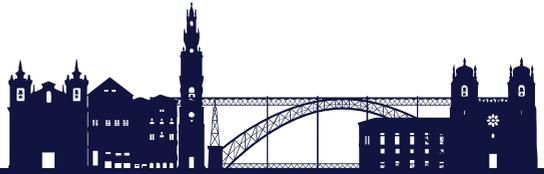
**Goals:** The aims of this study were to assess the effect of maternal screening for hepatitis B (HB) virus and a perinatal prevention program of mother-to-child transmission,

**Methods:** This retrospective cohort study enrolled 2316 pregnant women and their neonates with informed consent. Pregnant women underwent maternal universal screening for HBs antigen (Ag) in the first trimester. All neonates delivered from HBs Ag-positive women were given HB immune globulin and HB vaccine based on the guidelines of the perinatal prevention program.

**Results:** 2316 pregnant women were included in the study. 20 tested positive for HBs Ag. All neonates delivered from HBs Ag-positive women were given HB immune globulin and HB vaccine. There was no case of mother-to-child transmission, suggesting the perinatal HBV prevention program was effective.

**Conclusion:** Eradication of HBV is achievable with optimal management of HBV carriers, especially during pregnancy by interruption of vertical transmission. Routine antenatal screening and neonatal immunoprophylaxis remain the key measures to reduce the global HBV burden.

**Key words:** Hepatitis B virus, Immunoprophylaxis, Pregnancy, Vaccination, Vertical transmission



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