UMA INICIATIVA

Associação Portuguesa de Urologia

XVIII SIMPÓSIO APU

INTELIGÊNCIA ARTIFICIAL EM UROLOGIA

2024

18 a 20 OUTUBRO

Centro de Conferências Tróia Design Hotel

Imagem: Ad Médic

Programa

Programme

XVIII SIMPÓSIO APU

INTELIGÊNCIA ARTIFICIAL EM UROLOGIA

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Quinta-feira *Thursday* 17 | outubro | 2024 *October 17, 2024*

CURSOS PRÉ-SIMPÓSIO *PRE-SYMPOSIUM COURSES*

17:30-19:30h

CURSO 1 | *COURSE 1* — Sala | *Room* **Tejo**

Tertúlia de história da Urologia

Organizadores e moderadores: Manuel Mendes Silva e Alfredo Soares

A Urologia em Amato Lusitano
Manuel Mendes Silva (30 min.)

A Urologia no norte do país, apontamentos históricos
Alfredo Soares e Mário Reis (20 min.)

Breve história da Urologia em Coimbra
Alfredo Mota (20 min.)

Reynaldo dos Santos, uma vida e um legado
Ana Mafalda Reis (20 min.)

Discussão (30 min.)

17:30-19:30h

CURSO 2 | *COURSE 2* — Sala | *Room* **Douro**

Urologia pediátrica | *Paediatric urology*

Hipospádia – Tratamento e possíveis sequelas
Moderadores: Armando Reis e Vanda Pratas Vital
Comentadores: Paolo Casella e Paulo Príncipe

Técnicas cirúrgicas
Aline Vaz Silva (30 min.)

Transição para a idade adulta
Ana Coelho (30 min.)

Sequelas urinárias
Paulo Azinhais (30 min.)

Sequelas sexuais
André Marques Pinto (30 min.)

17:30-19:30h

CURSO 3 | *COURSE 3* — Sala | *Room* **Guadiana**

Como escrever um artigo científico | ***How to write a scientific article***

Coordenadores | *Coordenators*: Ricardo Leão e Helena Donato

Palestrante | *Speaker*: Helena Donato

Core guidance – Reporting guidelines

Ética de publicação

Preparação do manuscrito e estrutura

Critérios de autoria

Estilo da escrita

Inteligência artificial

17:00-20:00h

CURSO PRÁTICO | *PRACTICLE COURSE* — Sala | *Room* **Atlântico**

Laparoscopia (E-BLUS) e Endoscopia (EST-s1)

| ***Laparoscopy (E-BLUS) and Endoscopy (EST-s1)***

Apoio: OLYMPUS

XVIII SIMPÓSIO APU

INTELIGÊNCIA ARTIFICIAL EM UROLOGIA

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Sexta-feira *Friday* 18 | outubro | 2024 *October 18, 2024*

SIMPÓSIO *SYMPOSIUM*

07:00h Abertura do Secretariado | *Registration desk opening*

08:00-09:00h VÍDEOS 1 | *VIDEOS 1*
Moderadores | *Moderators*: António Pedro Carvalho e Raul Rodrigues
VD 01 – VD 05 | VD 07 – VD 10 | VD 20

09:00-13:00h CURSO PRÁTICO | *PRACTICLE COURSE*
Sala | *Room* **Atlântico**
Laparoscopia (E-BLUS) e Endoscopia (EST-s1)
| *Laparoscopy (E-BLUS) and Endoscopy (EST-s1)*
Apoio: OLYMPUS

09:00-09:20h CONFERÊNCIA | *CONFERENCE*
A importância da inteligência artificial para uma vida melhor
| *The importance of artificial intelligence for a better life*
Moderador | *Moderator*: Lilian Campos
Palestrante | *Speaker*: Pedro Gouveia (20 min.)

09:20-10:40h MESA-REDONDA 1 | *ROUND-TABLE 1*
Moderadores | *Moderators*: Frederico Furriel e Andrea Furtado

O papel da IA no diagnóstico e estadiamento do cancro urotelial
| *Role of AI in the diagnosis and staging of urothelial cancer*
Carmen Mir (15 + 5 min.)

O papel e os limites da IA na cirurgia do cancro urotelial | *Role and limits of AI in urothelial cancer surgery*
Arnulf Stenzl (15 + 5 min.)

astellas

Novo paradigma no tratamento do cancro urotelial | *New paradigm in urothelial cancer treatment*
Manuel Castanheira de Oliveira (15 + 5 min.)

MERCK

O papel da manutenção com avelumab em 1L no tratamento do UC
| *Frontline CT followed by avelumab maintenance continues to play a role in UC*
Alina Rosinha (15 + 5 min.)

10:40-11:00h Coffee-break

11:00-12:00h
Johnson&Johnson Innovative Medicine

SESSÃO PATROCINADA | *SPONSORED SESSION*

Decisões baseadas na prática clínica real e controvérsias no CPmHS | ***Decisions based on real-world clinical practice and controversies in mHSPC***

Palestrantes | *Speakers*: Sara Martínez Breijo, Luísa Alves e Hugo Antunes

12:00-13:00h

CASOS CLÍNICOS 1 | *CLINICAL CASES 1*

Inteligência artificial *versus* inteligência natural | ***Artificial intelligence versus natural intelligence***

Moderador | *Moderator*: Isaac Braga

Comentadores | *Commentators*: Carlos Silva, Belmiro Parada, Emanuel Dias e Rodrigo Ramos

Cancro da próstata | *Prostate cancer*

Cancro do rim | *Kidney cancer*

Cancro do pénis | *Penile Cancer*

13:00-13:15h

SESSÃO DE ABERTURA | *OPENING SESSION*

13:15-14:30h

Almoço | *Lunch*

14:30-15:40h

Novas tecnologias incorporadas nos serviços de Urologia nos últimos 2 anos e perspetivas futuras | ***New technologies incorporated in Urology departments in the last 2 years and future perspectives***

Moderadores | *Moderators*: Pedro Nunes e Vítor Oliveira

Hospital do Funchal
Ferdinando Pereira (6 + 2 min.)

Hospital de Santo António
Bernardo Teixeira (6 + 2 min.)

Hospital de São José
João Magalhães Pina (6 + 2 min.)

Hospital Tâmega e Sousa
Pedro Valente (6 + 2 min.)

Hospital de Aveiro
Hugo Antunes (6 + 2 min.)

Hospital da Luz Lisboa
Kris Maes (6 + 2 min.)

Hospital de Coimbra
Luís Sousa (6 + 2 min.)

Hospital de São João
Afonso Morgado (6 + 2 min.)

15:40-16:40h COMUNICAÇÕES ORAIS 1 | *ORAL COMMUNICATIONS 1*
Moderadores | *Moderators*: Luísa Alves e Pedro Valente
CO 01 – CO 12

16:40-17:00h Coffee-break

17:00-18:00h MESA-REDONDA 2 | *ROUND-TABLE 2*
Moderadores | *Moderators*: João Pina e Avelino Fraga

Inteligência artificial no diagnóstico imagiológico do carcinoma da próstata | *Artificial intelligence in the imaging diagnosis of prostate carcinoma*
Ana Castro Verde (15 + 5 min.)

Inteligência artificial no diagnóstico histológico do carcinoma da próstata | *Artificial intelligence in the histological diagnosis of prostate carcinoma*
Catarina Eloy (15 + 5 min.)

Terapêutica focal | *Focal therapy*
Vincenzo Ficarra (15 + 5 min.)

18:00-18:30h COLÉGIO DE UROLOGIA | *BOARD OF UROLOGY*
Avaliação do internato médico | ***Medical internship evaluation***
Luís Abranches Monteiro e Ricardo Pereira e Silva

18:30h ATIVIDADE NO EXTERIOR | *OUTSIDE ACTIVITY*

20:30h Jantar de Palestrantes | *Speakers Dinner*

Sábado *Saturday* 19 | outubro | 2024 *October 19, 2024*

08:00h Abertura do Secretariado | *Registration desk opening*

08:30-09:30h COMUNICAÇÕES ORAIS 2 | *ORAL COMMUNICATIONS 2*
Moderadores | *Moderators*: Jorge Correia e Miguel Rodrigues
CO 13 – CO 24

09:30-10:30h MESA-REDONDA 3 | *ROUND-TABLE 3*
Moderadores | *Moderators*: Luís Alvarez-Ossório e Francisco Botelho

Imagens com IA em carcinoma de células renais | *AI powered imaging in renal cell carcinoma*
Vital Hevia (15 + 5 min.)

Ferramentas de realidade aumentada na cirurgia de nefrectomia parcial | *Enhanced reality tools in partial nephrectomy surgery*
Lorenzo Marconi (15 + 5 min.)

MSD
Dados de vida real de recorrência no CCR no contexto português: Moldar o futuro com tratamento adjuvante | *Portuguese RWE of RCC recurrence: Shaping the future with adjuvant treatment*
Samuel Bastos (15 + 5 min.)

10:30-10:50h Coffee-break

10:50-11:50h SESSÃO PATROCINADA | *SPONSORED SESSION*
Bristol Myers Squibb
Integração da imunoterapia no carcinoma urotelial músculo-invasivo | ***Integration of immuno-oncology into management of MIUC***
Moderador | *Moderator*: Ricardo da Luz
Palestrantes | *Speakers*: Isaac Braga e Mário Fontes e Sousa

11:50-13:10h

MESA-REDONDA 4 | *ROUND-TABLE 4*

Moderadores | *Moderators*: Rui Lúcio e Luís Campos Pinheiro

Avanços recentes e horizontes futuros na prostatectomia radical robótica | *Recent advances and future horizons in robotic radical prostatectomy*
Rodolfo Borges dos Reis (15 + 5 min.)

Papel dos marcadores epigenéticos no carcinoma da próstata avançado | *The role of epigenetic markers in advanced prostate carcinoma*
Ana Maria Autran (15 + 5 min.)

astellas

CPHS – Novos desafios e oportunidades | *HSPC – New challenges and opportunities*
Carlos Rabaça (15 + 5 min.)

RECORDATI

O impacto do diagnóstico do cancro urológico no doente e possíveis estratégias de minimização | *The impact of urological cancer diagnosis in the patient and possible minimization strategies*
Ricardo Caetano (15 + 5 min.)

13:10-14:15h Almoço | *Lunch*

13:10-14:15h

ALMOÇO COM O ESPECIALISTA Sala | *Room* **Atlântico**

Boston Scientific
Advancing science for life™

A atualidade com laser na prática clínica da Urologia

14:15-15:10h

BOLSAS APU | *APU SCHOLARSHIPS*

Apresentação de resultados | ***Presentation of results***

Moderadores | *Moderators*: Arnaldo Figueiredo e Estevão Lima

Avaliação do sistema modular cálcio – STIM | Menção Honrosa atribuída em novembro de 2021
La Fuente de Carvalho (ULS Santo António) (5 + 2 min.)

Uma nova abordagem para potenciar a imunoterapia no cancro da bexiga avançado | Bolsa atribuída em setembro de 2019
Frederico Furriel (ULS de Leiria) (5 + 2 min.)

Molecular characterization of intraductal and cribriform prostate cancer: The future of exosomes as biomarkers | Bolsa atribuída em outubro de 2020
Rune Matthiesen (5 + 2 min.)

Espectrometria de massa de alta resolução em medicina personalizada: Proteoma urinário e desregulação de vias biológicas de inflamação como biomarcadores de mau prognóstico em doentes com carcinoma urotelial da bexiga t1 | Menção Honrosa atribuída em dezembro de 2020
Mariana Medeiros (ULS São José) (5 + 2 min.)

(Continua)

(Continuação)

O papel dos SGLT2i no tratamento da disfunção vesical induzida por síndrome metabólica | Menção Honrosa atribuída em dezembro de 2020
Gabriel Faria Costa (ULS Pedro Hispano) (5 + 2 min.)

Genomic evaluation of the microbial population colonizing ureteral catheters | Bolsa atribuída em janeiro de 2021
Andreia Cardoso (ULS de Braga) (5 + 2 min.)

15:10-16:10h

CASOS CLÍNICOS 2 | *CLINICAL CASES 2*
Inteligência artificial *versus* inteligência natural | ***Artificial intelligence versus natural intelligence***
Moderador | *Moderator*: Tiago Lopes
Comentadores | *Commentators*: Luiz Otávio Torres, José Palma dos Reis, Pedro Vendeira e Tiago Rodrigues

Sintomas urinários baixos | *LUTS*
Disfunção sexual | *Sexual dysfunction*
Urologia feminina | *Female Urology*

16:10-16:30h Coffee-break

16:30-17:50h

MESA-REDONDA 5 | *ROUND-TABLE 5*
Moderadores | *Moderators*: Ricardo Pereira e Silva e Paulo Dinis

Como a inteligência artificial pode melhorar a avaliação urodinâmica em disfunções de LUTS | *How can artificial intelligence improve urodynamic evaluation in LUTS dysfunctions*
Luís Vale (15 + 5 min.)

Incontinência urinária: De volta ao futuro | *Urinary incontinence: Back to the future*
Paulo Pé-Leve (15 + 5 min.)

O uso de inteligência artificial no diagnóstico e gestão da disfunção miccional | *The use of artificial intelligence in the diagnosis and management of voiding dysfunction*
Carlos Sacomani (15 + 5 min.)

OLYMPUS

MITS (iTind) no ambiente público e privado | *MITSs (iTind) in the public and private environment*
Tiago Rodrigues e Hugo Antunes (15 + 5 min.)

17:50-18:50h

COMUNICAÇÕES ORAIS 3 | *ORAL COMMUNICATIONS 3*
Moderadores | *Moderators*: Bruno Graça e Ricardo Patrão
CO 25 – CO 36

19:00-20:00h

ASSEMBLEIA GERAL DA APU | *APU GENERAL ASSEMBLY*

Domingo *Sunday* 20 | outubro | 2024 *October 20, 2024*

08:00h Abertura do Secretariado | *Registration desk opening*

08:30-09:40h VÍDEOS 2 | *VIDEOS 2*
Moderadores | *Moderators*: Kris Maes e João Cabral
VD 06 | VD 11 – VD 19 | VD 21

09:40-10:40h MESA-REDONDA 6 | *ROUND-TABLE 6*
Moderadores | *Moderators*: Vítor Cavadas e Rui Versos

IA e composição dos cálculos | *AI and composition of stones*
Nuno Fonseca (15 + 5 min.)

IA na otimização da predição de resultados no tratamento da litíase | *AI in optimizing outcome prediction in the treatment of lithiasis*
Renato Mota (15 + 5 min.)

Aspiração na cirurgia endoscópica da litíase | *Aspiration in endoscopic lithiasis surgery*
Peter Kronenberg (15 + 5 min.)

10:40-11:00h Coffee-break

11:00-12:20h MESA-REDONDA 7 | *ROUND-TABLE 7*
Moderadores | *Moderators*: Raquel João e António Morais

A IA pode ser um apoio na decisão multidisciplinar?
Roni C. Fernandes (15 + 5 min.)

MSD AstraZeneca

Medicina de precisão: O papel da mutação BRCA na gestão do doente com CPmRC | *Precision Medicine: The role of BRCAm in the management of mCRPC patients*
Arnaldo Figueiredo (15 + 5 min.)

Pfizer

O papel dos iPARP no tratamento do CPmRC (Cancro da próstata metastático resistente à castração) | *PARPi role in mCRPC treatment*
Arnaldo Figueiredo (15 + 5 min.)

Perspetivas futuras na sequenciação do cancro da próstata avançado | *Future perspectives in advanced prostate cancer sequencing*
Mário Lourenço (15 + 5 min.)

12:20-12:40h CONFERÊNCIA DE ENCERRAMENTO | *CLOSING CONFERENCE*

Inteligência artificial e os desafios da saúde em Portugal | ***Artificial intelligence and the challenges of health in Portugal***

Moderador | *Moderator*: Miguel Ramos

Palestrante | *Speaker*: Miguel Guimarães (20 min.)

12:40-12:55h ENCERRAMENTO DO SIMPÓSIO | *SYMPOSIUM CLOSURE*

Entrega da Bolsa de Investigação APU/Jaba Recordati | *Award of the APU/ Jaba Recordati Research Grant*

Entrega dos prémios aos melhores trabalhos do Simpósio | *Awarding of prizes to the best Symposium works*

COMUNICAÇÕES ORAIS

CO 01

SIX YEARS OF EXPERIENCE IN LAPAROSCOPIC RADICAL CYSTECTOMY: PENTAFECTA AND ITS IMPACT ON SURVIVAL

Miguel Marques Monteiro; Mariana Madanelo; Maria Alexandra Rocha; João Vital; Sofia Mesquita; Diogo Gil; Diogo Carneiro; José Soares; Avelino Fraga; Manuel Oliveira
Centro Hospitalar do Porto, EPE / Hospital Geral de Santo António

Introduction: Radical cystectomy is considered the gold standard treatment for the higher risk of non-metastatic bladder cancer. Despite evidence indicating surgical experience with perioperative and oncologic outcomes in open and robot-assisted radical cystectomy, there is a lack of data concerning laparoscopic radical cystectomy (LRC).
Objectives: to employ the radical cystectomy pentafecta criteria (PC) to assess the outcomes of laparoscopic radical cystectomy and the effects of surgical experience on perioperative and oncologic outcomes.
Methods: Between October 2016 and December 2023, we gathered data on patients who underwent LRC with pelvic lymph node dissection and extracorporeal urinary diversion for non-metastatic bladder cancer. The surgeries were conducted by a bladder surgery unit, led by a dedicated surgical team. We assessed consecutive patients into time-associated groups according to the operation order. Process efficiency was assessed by evaluating operative time and perioperative outcomes, while the achievement of pentafecta served as the primary endpoint. Oncological outcomes such as overall survival (OS) and recurrence-free survival (RFS) comprised further endpoints. We also evaluated the impact of surgical experience on surgery proficiency and quality.
Results: Out of the 155 patients analyzed, 64 (41.3%) achieved all five criteria of the pentafecta, while 106 (71.6%), and 132 (89.2%) attained four and three criteria, respectively. The mean pentafecta score was 4.1±1.0 (95% CI 4.0-4.3). Individually, negative surgical margins, removal of ≥ 16 lymph nodes, absence of major complications beyond Clavien-Dindo grade 3-5 within 90 days, absence of clinical recurrence within 12 months, and no ureteroenteric strictures requiring intervention were observed in 91.0%, 69.1%, 78.6%, 78.6%, and 85.2% of patients, respectively. Operative times-for IC and ONB were on average 241.5 (± 40.2) and 295.79 (± 33.7) minutes, respectively. For LRC with ileal conduit, operative times and the number of lymph nodes improved with increasing case numbers, indicating satisfactory proficiency in operation. The proportion of pentafecta attainment varied across consecutive operation order groups: Group 1: 33.3%; Group 2: 41.9%; Group 3: 50.0%; Group 4: 40.0%; and Group 5: 46.7%. Pentafecta attainment rates did not statistically change between the groups. Higher Charlson Comorbidity Index, extravesical disease, and positive lymph node status were independent predictors of non-attainment of pentafecta in both uni and multivariable analysis. The three and five-year overall survival rates were 66.5% and 54.7%, respectively. Patients who achieved all 5/5 pentafecta criteria showed higher OS and RFS compared to those who did not attain all criteria (overall log-rank $p < 0.001$). Pentafecta attainment was associated with favorable outcomes regarding OS, even after adjusting for known confounders (hazard ratio [HR] 0.48 [0.24-0.98], $P < 0.001$).
Conclusion: Laparoscopic Radical Cystectomy demonstrated a satisfactory level of proficiency and surgical quality, and pentafecta criteria

achievement was associated with improved recurrence-free survival and overall survival. However, in our series, only operative time and number of lymph nodes yielded were improved with increasing experience.

CO 02

OUTCOMES OF SUPERVISED LAPAROSCOPIC RADICAL PROSTATECTOMIES PERFORMED BY RESIDENTS

Miguel Marques Monteiro[1]; Bernardo Teixeira[1]; Gonçalo Mendes[1]; Jorge Correia[2]; Catarina Tavares[3]; Mariana Madanelo[1]; Diogo Carneiro[1]; João Cabral[1]; José Soares[1]; Frederico Teves[1]
[1] Centro Hospitalar do Porto, EPE / Hospital Geral de Santo António; [2] IPO do Porto; [3] Hospital de Braga

Introduction: Supervised surgical apprenticeship is crucial for the development and progress of residents, having a significant impact on their future role as consultants. Supervised teaching is crucial in ensuring the maintenance of good practices while not significantly compromising surgical outcomes. However, there was a concern that major urologic surgeries performed by residents, such as laparoscopic radical prostatectomy, may potentially affect surgical quality. We hypothesize that laparoscopic radical prostatectomy (LRP) performed by residents, when adequately supervised, can be safely conducted without compromising functional and oncologic results.
Objective: The primary objective of this study was to evaluate the functional and oncologic outcomes of LRP performed by residents compared to those performed exclusively by specialist consultants.
Methods: We retrospectively reviewed the clinical records of patients who underwent laparoscopic radical prostatectomy between January 2021 and December 2022 at a tertiary center in Portugal. Patients proposed for salvage laparoscopic radical prostatectomy or with less of 12 months of follow-up were excluded. Oncologic outcomes were determined by evaluating the positive surgical margin (PSM) rate and PSA persistence at 6 weeks (PSA levels ≥ 0.1 ng/mL) and biochemical recurrence (PSA levels ≥ 0.2 ng/mL) at 12 months. Subjective erectile dysfunction (ED) at 12 months and urinary incontinence at 6 weeks, 12 weeks, and 12 months were assessed. Urinary continence was defined as no pads used, and subjective ED was defined as minor or no changes in erectile function relative to preoperative status. Perioperative outcomes, number of pads used, severity of ED, and use of PDE5 inhibitors were evaluated as secondary outcomes. Complications within 3 months post-surgery were classified according to the Clavien-Dindo system. Descriptive and comparative statistical analysis was performed using SPSS Statistics 28®. A two-sided p-value <0.05 was considered statistically significant.
Results: Supervised LRP (n = 67) performed by residents (sLRP) and LRP (n = 59) performed by consultants (cLRP) were compared. There were no significant differences between age, body mass index, biopsy ISUP grade, preoperative prostate size, and MRI T stage (all p >0,05). PSA persistence was observed in 16.9% and 20.0% for the sLRP and cLRP, respectively (p = 0.636). Biochemical recurrence was observed in 10.8% and 10.5% for the sLRP and cLRP, respectively (p = 0.955). There was also no statistically significant difference in the PSM rates between the two groups. Postoperative urinary incontinence at 6 weeks, 3 months, 12 months after surgery were 36.1%, 23.9% and 11.9% for sLRP and 63.9%, 33.8%, and 18.8% for eLRP, only with statistical different at 6 weeks (p<0,05). There were no significant differences in ED rates at 12 months (64.0% vs 61.7%, p= 0.771), including after stratification according to severity (all p> 0,05). Regarding perioperative outcomes, sLRP has a longer operative time compared to cLRP (158 min ± 31.3 vs. 124.8 ± 31.3 min, p < 0.01). There was no difference in estimated blood loss, intraoperative complications, 90-day complications and readmission rates (all p>0,05). There was a mild difference between the length of stay (LOS) in favor of sLRP (2 (2–3) vs. 3 (2–3), p<0,01), but this difference was dissolved comparing the number of patients with LOS ≤ 2 days.
Discussion/Conclusion: Supervised laparoscopic radical prostatectomy can be safely performed by residents without compromising functional and oncologic outcomes.

CO 03

USING PREOPERATIVE MPMRI GRADING SYSTEM FOR ASSESSMENT OF RISK OF EPE OF LOCALIZED PROSTATE CANCER

Miguel Marques Monteiro; Maria Alexandra Rocha; Mariana Madanelo; Sofia Mesquita; João Vital; Nuno Vinagre; Diogo Carneiro; João Cabral; João Amorim; Manuela França; Avelino Fraga
Centro Hospitalar do Porto, EPE / Hospital Geral de Santo António

Introduction: Extraprostatic extension (EPE) is associated with a higher risk of positive surgical margins, metastatic disease, and lower cancer-specific survival after radical prostatectomy.

Preoperative assessment of the location of EPE may help to optimize clinical decision-making, preoperative patient counseling, and improve the surgical nerve-sparing strategy, aiming to find a finer balance between oncologic control and functional outcomes.

Objective: The primary purpose of this study was to assess the performance of a validated preoperative multiparametric MRI grading system in the assessment of the risk of extraprostatic extension of Prostate Cancer and in predicting the risk of PSA persistence, biochemical recurrence, and positive surgical margins.

Methods: We conducted a retrospective review of patients with localized prostate cancer diagnosed by prostate biopsy who underwent radical prostatectomy between 2021-2023. Patients lacking preoperative mpMRI were excluded from the analysis. Clinical, pathological, and mpMRI data was retrieved from clinical records. An MRI-based EPE grading system was defined as follows: curvilinear contact length of 1.5 cm or capsular bulge and irregularity were grade 1, both features were grade 2, and frank capsular breach or invasion of adjacent struct were grade 3. Both univariable and multivariable logistic regression and ROC curves were performed to compare the MRI grade model and clinical parameters (prostate-specific antigen, ISUP on biopsy, digital rectal exam) for pathologic EPE prediction using SPSS Statistics 28®. A two-sided p value <0.05 was considered statistical significant.

Results: We analyzed 176 patients with a median age of 67 (63-72) years and a preoperative median prostate-specific antigen value of 9.2 (6.5-13.4) ng/mL. A total of 70 (39.8%) participants had pathologic EPE on radical prostatectomy specimens. For MRI grades 1, 2, and 3 the detection of pathologic EPE were 18 of 37 (48.6%), 10 of 12 (83.3), and 16 of 19 (84.2%), respectively. The negative predictive value (MRI-derived grade ≥1) was 75.9%. Detection of pathologic EPE for individual MRI features, was as follows: curvilinear contact length, 30 in 70 (64.2%); capsular bulge and irregularity, 30 of 36 (83.3%); and clear EPE visible at MRI, 16 of 19 (84.2%). Higher MRI-based EPE grading categories were associated with greater odds of pathologic EPE compared to clinical parameters (AUC 0.73 vs AUC 0.62 p<0.05). Higher MRI-based EPE grades were associated with greater odds of PSA persistence (OR 1.87 95%IC 1.33-2.62, p<0.001), non-confined organ disease OR 3.66 95%IC 2.27-5.90, p<0.001), positive surgical margins (OR 1.72 95%IC(1.23-2.41, p=0.002), in both uni and in multivariable analysis. However, no statistically significant association between the MRI grading system and biochemical recurrence was found.

Discussion/Conclusion: MRI-based extraprostatic extension grading categories are a useful tool for predicting EPE, with the highest diagnostic performance compared to clinical parameters. Higher MRI-based grading categories were associated with a greater risk of PSM and PSA persistence. Therefore, this tool may be helpful in selecting patients for nerve-sparing surgery

CO 04

PREDICTORS OF MULTIDRUG-RESISTANT UTIS AFTER CYSTECTOMY AND URINARY DIVERSION SURGERY

Marques Monteiro; Guilherme Gonçalves;
Martinha Magalhães; Beatriz Oliveira; Helena Sousa;
Nuno Vinagre; João Vital; Sofia Mesquita;
Alexandra Rocha; Mariana Madanelo; Avelino Fraga;
Manuel Oliveira
CHUdSA

Introduction: Urinary tract infection (UTI) following urinary diversion are a main cause of high-grade post-discharge complications that carries significant morbidity and risk of readmission.

Objective: This study aims to assess the incidence, microbiology, and predictors of urinary tract infection in patients who have undergone urinary diversion and cystectomy. We also want to estimate the effects of number of UTIs on the development of infection by multidrug resistant (MDR) pathogens and increasing of length of stay after readmission.

Materials and methods: We conducted a retrospective review of 258 patients who underwent cystectomy and urinary diversion at a tertiary medical centre between 2014 and 2023. Our data analysis encompassed UTI events following hospital discharge. Cumulative incidence rates for clinical events at 90-days, 180 days and 365 days were determined. Presence of persistent postoperative hydronephrosis and need of percutaneous nephrostomy was registered. Clinical, surgical, pathological Characteristics are recorded. We employed univariate logistic regression models to identify clinical predictors of infection and multidrug resistant pathogens.

Results: 201 patients were included in the study. A total of 279 urinary tract infections (UTIs) were recorded in 125 patients (11%) during the follow-up period, with 52% of UTIs events leading to readmission. The estimated cumulative rates of symptomatic UTIs were 33.9% at 3 months, 40.9% at 6 months, and 45.3% at 12 months post-surgery. Sixty-five (38.9%) of ileal conduit diversion (ICD)

patients and eleven (32.4%) of orthotopic neobladder (ONB) patients did not experience any UTIs during the follow-up period.The predominant pathogens responsible for these infections were Klebsiella spp. (31%), Escherichia coli (27.6%), and Enterococcus spp. (20.7%). During the follow-up, 22.4% presented at least one MDR UTIs event. Patients with more than two UTIs exhibited a significantly increased MDR UTIs rate (37.2% vs. 15.0%, p = 0.029). There was a higher number of UTIs in patients with MDR pathogens compared to those without (3.1 vs. 2.0 UTIs per patient, p < 0.01). Cephalosporins were prescribed as empiric treatment in 55% of cases, while carbapenems were used in 14.9%. Approximately 17.3% of UTI episodes required escalation to a broader spectrum antibiotic regimen, with only 36.7% of patients subsequently de-escalated to a narrower spectrum. Fifty-five patients (27.4%) developed post-operative hydronephrosis, with 54.5% presenting bilaterally, 34.5% on the left, and 11% on the right. Among these patients, 45.5% developed hydronephrosis within the first 90 days, and 61.8% within one year. Seventeen patients (8.5%) required percutaneous nephrostomy placement during the follow-up period, with 47.1% occurring within the first 90 days. In univariable analysis, the presence of hydronephrosis and percutaneous nephrostomy were associated with higher UTI rates (OR = 2.7, 95% CI 1.3–6.9, p < 0.01, and OR = 5.0, 95% CI 1.1–22.7, p = 0.04, respectively) and MDR UTIs (OR = 5.8, 95% CI 2.5–13.5, p < 0.01, and OR = 2.1, 95% CI 1.2–6.8, p < 0.05, respectively). An increasing number of UTIs was also associated with the presence of MDR pathogens (OR = 2.6, 95% CI 1.2–5.7, p < 0.01). Factors such as age, gender, Charlson Comorbidity Index, diabetes, and perioperative chemotherapy had no significant impact on UTI rates. Increasing number of UTIs were not associated with increasing of length of stay after readmission.

Conclusions: Urinary tract infection stands out as one of the most common causes of complications and readmissions after cystectomy with urinary diversion, particularly within the initial 90 days. Enterobacteriaceae are notably prevalent in this context. Patients who have experienced two or more UTIs are at a higher risk of encountering multidrug-resistant pathogens. Additionally, hydronephrosis and presence percutaneous nephrostomy is independently associated with a risk of urinary tract infection and the presence of multidrug-resistant pathogens.

CO 05

TEMPO IDEAL DE REMOÇÃO DO CATETER DUPLO J APÓS TRANSPLANTE RENAL

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Introduction: Renal transplant ureteric anastomosis can be performed with or without ureteric stent, although most experts advise its use to reduce major urological complications, especially urinary leak. The optimal timing for stent removal has yet to be defined. Some studies suggest that the early removal of the stent may protect the patient from complications such as infection and stenosis, minimizing the number and severity of readmissions, while others do not find a clinical correlation between these variables. This study aimed to evaluate and determine the optimal timing for ureteric stent removal.

Materials and methods: We designed a case control study using our prospectively maintained renal transplant database. We selected patients with post-transplant urinary tract infections and compared them with controls that underwent kidney transplant at the same period - June of 2019 and April of 2023. Pediatric patients, primary dysfunctions and cases without systematized information were excluded from the analysis. Demographic, clinical and laboratorial data were analysed and time to ureteric stent removal was compared with independent samples T-Test. The final analyses were composed of 338 patients.

Results: Ureteric stent removal times were 57.39 ± 28.09 days (mean ± standard deviation) with a minimum and maximum of 9 and 343 days (range 334 days), respectively, making it impossible to dichotomize the sample into any early and late removal groups, neither by clinical nor statistical parameters. Interquartile range was 21 days (between Q1 – 43,75 days and Q3 – 65.00 days). Most of the patients wouldn't be able to be classified as early removers by clinical parameters. No statistically significant difference was found between the number of days with the Double J stent and any of the studied complications, neither together as a whole ("Complications Any", "UTI Any"), or individually as separated variables (both clinical and/or biometric). Biometrical and clinical descriptive characterizations were elaborated and did not show statistically different parameters between the groups of presence and absence of complications.

Discussion/Conclusion: In virtue of this series homogeneity, it was not possible to stablish an optimal timing to remove de Double J stent. No identifiable differences between the complications and any of the clinical or biometric parameters were detected. We aim to conduct a RCT with early (<15days) vs late removal of ureteric stent to address our study question.

Keywords: Kidney Transplantation, Ureteral Catheter, Urinary Tract Infections, Postoperative Complications

CO 06

TRANSRECTAL PROSTATE BIOPSY AFTER FOSFOMYCIN, INTRARECTAL POVIDONE-IODINE AND NEEDLE DISINFECTION

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Introduction: Prostate biopsies are generally safe, but complications such as bleeding and infections can occur. Not all hospitals have been able to adapt to the transperineal approach; we must ensure patient safety until then. Using fosfomycin as a prophylactic antibiotic currently depends on validation based on local guidelines. Additionally, there is a lack of standardized protocols for rectal cleansing with povidone-iodine before transrectal prostate biopsy, consequently, various methods have been employed. Studies on sampling collection have reported conflicting results regarding needle disinfection with formaldehyde between tissue fragments. To standardize these practices, we have developed a protocol for prostate biopsies.

Objectives: Our primary endpoint is to assess the safety of performing a transrectal prostate biopsy with intrarectal povidone-iodine instillation, formalin needle disinfection,and the use of fosfomycin as the prophylactic antibiotic.

Materials & methods: Between February 2024 and June 2024 were prospectively assessed 129 patients submitted to transrectal prostate biopsy. Relating to prophylaxis, the protocol consisted of taking 2 g of fosfomycin. Some patients received cefixime or quinolones as prophylaxis since they were observed before the application of the protocol, they were used as a comparator group. All patients had rectal cleansing with povidone-iodine. Before the biopsy, 10cc of povidone-iodine solution and 11cc of Instilagell® were instilled rectally. In addition, between the collection of each fragment, the needle was disinfected with formaldehyde. A statistical analysis was conducted with SPSS 27 using one-way ANOVA, and Chi-square test.

Results: The patients' ages ranged from 52 to 93 years (SD = 7.709). PSA levels varied from 1.31 to 1279.00 (SD = 114.64), and prostate volumes from 15 to 138 (SD = 21.55). Most patients (73.6%) were not on anticoagulants. Fosfomycin was the predominant antibiotic prophylaxis (76.7%), followed by cefixime (14.0%), levofloxacin (6.2%), and ciprofloxacin (3.1%). The majority (96.1%) experienced no complications. Minor complications included syncope (1.6%) and prostatitis (1.6%), with one patient dying from hypovolemic shock. No significant association was found between complications and the type of prophylactic antibiotic, anticoagulation status, prostate volume, rectal examination, and number of cores (P>0.05). PSA levels were significantly associated with a higher rate of complications (P<0.05).

Discussion/Conclusions: We can conclude that higher PSA levels are associated with an increased rate of complications. Additionally, a transrectal prostate biopsy performed with prophylactic administration of fosfomycin, intrarectal povidone-iodine instillation, and formalin needle disinfection has a comparable rate of complications compared with other types of prophylactic antibiotics.

CO 07

NEFRECTOMIA RADICAL COM TROMBECTOMIA DA VEIA CAVA - AVALIAÇÃO DE RESULTADOS NUM CENTRO DE REFERÊNCIA

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Introdução: O carcinoma de células renais tem uma propensão para a invasão venosa, nomeadamente com envolvimento da veia cava que pode ocorrer em até 10% dos casos. A nefrectomia radical com trombectomia da veia cava (NR-TV) é um procedimento cirúrgico complexo que apresenta desafios significativos.

Objetivo: Análise dos resultados da NR-TV num centro de referência.

Métodos: Análise retrospetiva de doentes submetidos a NR-TV aberta num centro de referência entre 2014 e 2023. O envolvimento da veia cava foi classificado usando a classificação de Mayo modificada. Foram avaliados dados demográficas, variáveis cirúrgicas, complicações pós-operatórias e resultados oncológicos.

Resultados: Obteve-se uma amostra de 52 doentes, predominantemente do sexo masculino (90,4%), com uma idade média de 64,5±10,8 anos. O tempo médio desde o diagnóstico até à cirurgia foi de 21,1±11,5 dias. O trombo nível 2 esteve

presente em 30,8%, nível 3 em 23,1% e nível 4 em 17,3% dos casos, com necessidade de cirurgia cardiotorácica, e 13,5% com necessidade de circulação extracorpórea. A duração média da cirurgia foi de 220±37 minutos. O carcinoma de células claras foi o subtipo histológico mais comum (80,8%), com o estágio T3b a ser o mais frequente (57,7%). Foram identificados gânglios patológicos e margens cirúrgicas positivas em 15,3% e 19,2%, respetivamente. Ocorreram complicações pós-operatórias em 23,1% dos doentes – 9,6% no Grau III, 1,9% no Grau IV e 5,8% no Grau V de Clavien-Dindo. A necessidade de suporte transfusional foi de 42,3% com 19,0% a necessitar de admissão em cuidados intensivos. O tempo médio de internamento foi de 14,6±10,5 dias. No momento do diagnóstico, 15,4% dos doentes apresentavam doença metastática, com outros 15,4% a desenvolverem metástases durante o seguimento. A terapia adjuvante foi realizada em 23,1% dos casos. A sobrevida global média foi de 68,2±11,7 meses e a sobrevida global aos cinco anos foi de 23,1%. Um intervalo entre o diagnóstico e a cirurgia inferior a 14 dias foi associado a uma redução nas complicações pós-operatórias (p=0,020), embora sem influência na sobrevida. A mortalidade aos 30 dias foi influenciada pela presença de trombo nível 4 (p=0,014). A idade média mais elevada associou-se significativamente à mortalidade aos 30 dias e às complicações pós-operatórias (p=0,013 e p=0,025, respetivamente).

Discussão e conclusão: A NR-TV é procedimento tecnicamente exigente com uma alta taxa de complicações. Os nossos resultados sugerem que a realização da cirurgia dentro de 14 dias após o diagnóstico pode reduzir o risco de complicações e que os doentes mais velhos têm taxas mais elevadas de mortalidade aos 30 dias e complicações.

CO 08

RELEVÂNCIA DA PROTRUSÃO PROSTÁTICA INTRAVESICAL NA PROSTATECTOMIA RADICAL LAPAROSCÓPICA

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Introdução: A protrusão prostática intravesical (PPI) é uma medida que avalia a distância entre a ponta do lobo médio da próstata e o colo vesical, no plano médio-sagital, utilizando uma sonda ecográfica suprapúbica. Este valor demonstra uma boa correlação com a obstrução do trato urinário inferior (BOO), o volume prostático, a hiperatividade do detrusor, a complacência vesical, a pressão do detrusor no fluxo urinário máximo, o índice de BOO e o volume residual pós-miccional, além de apresentar uma correlação negativa com o fluxo urinário máximo (Qmax). No contexto do cancro de próstata, a PPI está associada à recuperação precoce da continência após a prostatectomia. No entanto, ainda existem áreas pouco exploradas, como a relação entre a PPI e o colo vesical e o impacto desta relação na cirurgia, incluindo a dificuldade cirúrgica, a necessidade de reconstrução do colo, o aumento da hemorragia e do tempo operatório. Além disso, a correlação entre a PPI e a agressividade tumoral, incluindo o estadio TNM, o grau ISUP e os níveis de PSA, ainda não é bem compreendida.

Objetivos: Foi conduzido um estudo retrospetivo unicêntrico, não randomizado, com pacientes submetidos a prostatectomia radical laparoscópica nos anos de 2021 e 2022, com o objetivo de avaliar o impacto da PPI no desfecho cirúrgico e funcional dos doentes.

Material e métodos: A ressonância magnética prostática foi utilizada para medir a PPI no plano médio-sagital com ponderação T2. Em seguida, os pacientes foram divididos em dois grupos: um grupo controlo com PPI inferior a 10 mm e um segundo grupo com PPI igual ou superior a 10 mm. Foram avaliadas as seguintes variáveis: medicação prévia para hiperplasia benigna da próstata (HBP), nível de PSA, volume prostático, tempo operatório, volume de perdas hemorrágicas, grau ISUP da biópsia, grau ISUP da peça operatória, estadiamento patológico, margens positivas, persistência de PSA, tempo de hospitalização, tempo de algaliação, complicações pós-operatórias e avaliação da continência urinária aos 1 mês, 3-6 meses e 1 ano.

Resultados: Foram analisados 117 pacientes: 87 no grupo controlo e 30 no grupo com protrusão prostática intravesical (PPI) ≥ 10 mm. No grupo controlo, 25% usavam medicação para hiperplasia benigna da próstata (HBP), comparado a 53% no grupo com PPI ≥ 10 mm. A média de PSA pré-operatório foi 11,6 ng/mL no grupo controlo e 10,3 ng/mL no grupo com PPI ≥ 10 mm. O volume prostático médio foi 45 cc vs 77 cc, o tempo operatório médio foi 159 minutos vs 149 minutos e as perdas hemorrágicas médias foram 222 mL vs 272 mL.

No grupo controlo, os graus ISUP foram: 1% ISUP 1, 44% ISUP 2, 41% ISUP 3, 3% ISUP 4 e 10% ISUP 5. No grupo com PPI ≥ 10 mm, foram: 10% ISUP 1, 50% ISUP 2, 30% ISUP 3, 7% ISUP 4 e 3%

ISUP 5. O estadiamento patológico foi 52% pT2, 28% pT3a e 20% pT3b no grupo controlo, e 80% pT2, 13% pT3a e 7% pT3b no grupo com PPI ≥ 10 mm. As margens positivas foram 52% no grupo controlo e 36% no grupo com PPI ≥ 10 mm, e a persistência de PSA foi 20% vs 17%. O tempo médio de hospitalização foi 3 dias em ambos os grupos dias e o tempo médio de algaliação foi 10 dias vs 11 dias. As complicações pós-operatórias foram 6% vs 7%, e as taxas de incontinência urinária foram 47% vs 50% ao 1 mês, 30% vs 17% aos 3-6 meses e 16% vs 10% aos 12 meses.

Discussão/Conclusões: O estudo avaliou o impacto da PPI em doentes submetidos a prostatectomia radical laparoscópica. Doentes com PPI ≥ 10 mm apresentaram maior uso de medicação para HBP e volume prostático superior, sem correlação clara com a agressividade tumoral. A PPI elevada associou-se a maiores perdas hemorrágicas, mas, surpreendentemente, a uma melhor recuperação da continência urinária aos 3-6 e 12 meses. Conclui-se que a PPI não parece agravar o prognóstico funcional, particularmente na recuperação da continência, nem indicar maior agressividade tumoral.

CO 09

MICROUS: UMA ALTERNATIVA À RMN NO DIAGNÓSTICO DE CANCRO DA PRÓSTATA?

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Introdução: A ressonância magnética multíparamétrica (mpRMN) é atualmente essencial para o diagnóstico do carcinoma da próstata (CaP). No entanto, limitações como o elevado custo, restrições de acessibilidade e contraindicações associadas justificam a necessidade de explorar métodos alternativos de diagnóstico com eficácia semelhante. Neste contexto, a micro-ultrassonografia (microUS) emerge como uma potencial ferramenta diagnóstica promissora.

Objetivo: Este estudo visa descrever os resultados da biópsia dirigida na detecção de carcinoma da próstata clinicamente significativo (csCaP), utilizando a mpRMN e a microUS, num Centro Hospitalar terciário.

Métodos: Foram incluídos no estudo 25 doentes, com suspeita de CaP e indicação para realização de biópsia prostática. Realizaram-se 27 biópsias dirigidas. Todos os doentes foram submetidos a avaliações por mpRMN e microUS. A amostra foi avaliada quando a idade, valores de PSA, volume prostático e analisadas as diferenças na sensibilidade, especificidade, valor preditivo positivo e negativo do PiRADS (usado na mpRMN) comparativamente ao PRIMUS (usado na microUS).

Resultados: A amostra analisada apresentou uma média de idade de 73 anos. A mediana dos valores de PSA e volume prostático foi de 9,48 e 55, respectivamente, sem diferenças significativas entre os csCaP e os não clinicamente significativos. Entre as 14 lesões (51,9%) diagnosticadas como csCaP (ISUP ≥ 2), 13 apresentavam resultados suspeitos na microUS (PRIMUS ≥ 3) e 13 na mpRMN (PiRADS ≥ 3). A sensibilidade para detecção de csCaP foi idêntica em ambos os métodos, com valores de 93%. A especificidade foi relativamente baixa em ambos os grupos: 8% para PRIMUS ≥ 3 e 15% para PiRADS ≥ 3. No entanto, a especificidade aumentou consideravelmente para 54% no grupo PRIMUS ≥ 4, em comparação com 38% no grupo PiRADS ≥ 4.

Conclusão: A microUS demonstra-se uma ferramenta diagnóstica promissora e de fácil implementação na detecção do carcinoma da próstata clinicamente significativo.

CO 10

ROBOT-ASSISTED PARTIAL NEPHRECTOMY WITH THE NEW HUGORAS SYSTEM: SINGLE CENTER MATCHED-PAIR ANALYSIS

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Purpose: Laparoscopic-assisted surgery is still the gold standard for partial nephrectomy in many referred urological institutions. Recently a new platform was introduced, having few robust studies comparing with classic laparoscopy. Our study aims to compare the perioperative, functional, oncological and trifecta outcomes of laparoscopic partial nephrectomy (LPN) and robot-assisted partial nephrectomy (RAPN) performed with the new HUGO RAS for small renal masses within a tertiary and high-volume center.

Methodology: We retrospectively collected data on all patients who underwent RAPN for small renal masses since the introduction of the technique in our tertiary center, between May 2023 and July 2024, and from a database of patients submitted to laparoscopic partial nephrectomy from January 2015 to April 2023. Patients data regarding perioperative, functional, and oncological outcomes were collected. All normally distributed continuous variables were presented as mean and compared using the independent *t*-test, while the non-

normally distributed ones were described as median and IQR and compared by means of the Mann-Whitney U test. Categorical variables were presented as proportions and analyzed with the χ2 test or Fisher's exact test. Propensity score matching (PSM) (1:1) method was applied to mitigate any significant differences between the two groups.

Results: After PSM, were included 42 patients in the LPN group and 42 patients in the RAPN group with an enhanced balance for all preoperative characteristics. The RENAL nephrometry score median was similar between the two groups (7.0 in the LPN group vs 7.0 in the RAPN group, p=0.096). Regarding post-operative data, no significant differences were found in operative time (115 min in the LPN group vs 117.5 min in the RAPN group, p=0.932), estimated blood loss (100 mL in the LPN group vs 100 mL in the RAPN group, p=0.978), and warm ischemia time (17.8 min in the LPN group vs 19.3 min in the RAPN group, p=0.155). However, RAPN demonstrated a significantly shorter hospital stay (5 days vs 3.5 days, p=0.002). The complication rate was similar between the two groups (19% in the LPN vs 14.3% in the RAPN, p=0.558), the majority being Clavien-Dindo I-II. A lower trend towards positive surgical margins was observed in RAPN group, even if not statistically significant (9.5% vs. 7.1%, p=1). Oncological control and overall surgical success, assessed by Trifecta achievement (WIT ≤ 25 min, no positive surgical margin, and no postoperative complication Clavien-Dindo ≥2), was comparable between the two groups (82.9% in the LPN group vs. 81% in the RAPN group, p=0.815).

Conclusion: The study demonstrated comparable outcomes between the LPN and RAPN groups, reenforcing the effectiveness and safety of the new HUGO RAS platform for partial nephrectomy, shortening the learning curve among novice robotic surgeons without compromising oncological success.

Keywords: Robot Surgery; Robot-Assisted Surgery; Robot-Enhanced Procedures; Robot-Enhanced Surgery; Partial Nephrectomy; Kidney Cancer.

CO 11

IMPACT OF RECREATIONAL FOOTBALL IN MEN WITH PROSTATE CANCER UNDERGOING ANDROGEN DEPRIVATION THERAPY

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Introduction: Androgen deprivation therapy (ADT) remains a fundamental component in the management of PCa, Side effects include loss of lean body mass, increased fat mass, decreased bone mineral density, increased risk of fractures and poor functional performance. Therefore, strategies targeting the mitigation of ADT-induced adverse effects could yield significant survival benefits for patients with PCa. The popularity of recreational football, alongside its physical challenges has spurred the adoption of this modality for men undergoing ADT. The PCaGoal program aimed to evaluate the effects of supervised recreational football-based exercise intervention on physical functioning, cardiovascular and metabolic health, bone strength, and quality of life in men with PCa receiving ADT.

Methods: The PCaGoal program is a single-arm trial aimed at men with locally advanced or metastatic PCa undergoing ADT allocated to a supervised recreational football-based exercise intervention. The study was conducted from september 2022 to august 2023. Patients were invited to participate in 2-3 one-hour weekly sessions for 8 months and encouraged to participate in at least 2 session/week. Outcomes were physical functioning (postural balance, agility, muscle strength and aerobic capacity), blood pressure, lipid profile (LDL-cholesterol, HDL-cholesterol, total-cholesterol and triglycerides), glucose, glycated haemoglobin (HbA1C) and high sensitivity C-reactive protein (CRP), proximal femoral and lumbar spine (L2-L4) bone mineral density (BMD) and quality of life (EORTC QLQ-C30 and QLQ-PR25). Patients underwent two main outcome assessments – at baseline (before the onset of the program) and a final assessment after 8 months. Additionally, physical performance was reassessed after 4 months into the program. Our reporting exclusively includes outcomes from patients who completed all assessments.

Descriptive and inferential statistical analysis was performed using the IBM® SPSS®Statistics version 29 software.

Results: From September to October 2022, 23 interested patients were screened for eligibility and

12 were included and completed the supervised recreational football-based exercise program. The remaining patients declined participation in the program for the following reasons: geographic distance/ travel time (n=5), incompatible schedule (n=3), poor physical condition (n=2) and a fracture secondary to a fall during recruitment (n=1).
The mean age of patients was 72.1 (3.4). At baseline, the median time on ADT was 23.0 months (7.0-47.5). Bone metastases were presented in 5 patients. None of these patients exhibited symptomatic disease that would render them ineligible for training.
During the program, 80 football sessions were conducted. Patients attended 77% (18%) of the training sessions or 2.0 (0.5) training sessions/week. The median number of falls was 5.0 (3.0-5.5). There were 10 injuries reported during 738 hours of training (13.6 lesions/1000h). One rib fracture was reported.
Significant differences were observed in postural balance between the baseline assessment and those conducted at 4 and 8 months (Table 2). The mean number of falls before completing 1 minute in balance decreased from 19.8 (8.8) to 11.6 (4.9) at 8 months ($p<0.001$). Agility also showed significant differences between the baseline assessment, the 4-month assessment, and post-intervention (Table 2). The sit-to-stand performance improved from baseline to the 4-month assessment (16.7 vs. 20.6 repetitions, $p=0.003$) and post-intervention (16.7 vs. 23.7 repetitions, $p<0.001$). A significant improvement of aerobic capacity was recorded, with the patients improving the distances walked over 6 minutes (580.0 vs. 537.5, $p=0.005$).
There was a significant reduction in systolic blood pressure from a median of 134 to 123 and a non-statistically significant decrease in diastolic blood pressure from a mean of 80 to 73mmHg. There were no significant differences for lumbar and femoral BMD. A tendency for higher general health status post-intervention (80.6 vs. 70.8, p=0.094) and a significant difference in the cognitive domain (83.0 vs. 100.0, p=0.020) were recorded.
Conclusions: Accumulating evidence suggests that exercise may ameliorate adverse effects related to ADT. This study contributes to current knowledge by demonstrating that a supervised recreational football-based exercise program improves physical fitness, aerobic capacity, systolic blood pressure and quality of life. Consequently, it could be considered as a viable alternative to conventional interventions in real life-settings.

CO 12

ARTIFICIAL INTELLIGENCE IN URODYNAMICS - A SCOPING REVIEW

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Introduction: Voiding disorders cause severe morbidity and lowers quality of life in both children and adults. Urologists rely heavily on urodynamic studies (UDS) to diagnose and assess the presence and severity of lower urinary tract pathology and can be important in determining whether individuals are at risk for complications, but their interpretation has high interobserver variability (that can be higher than 50%) and time/resources consuming. While Machine learning is used with increasing frequency in healthcare, recent research has applied it to read and interpret UDS.
Objectives: As part of this project, we aim to undertake a scoping review of recent literature in order to determine the current state-of-the-art of artificial intelligence in Urodynamics (including uroflowmetry, urodynamic studies and videourodynamics) and to identify its challenges and constraints.
Materials and methods: MESH search terms derived from the key questions were incorporated into the literature search constructed and English medical literature was accessed. The initial search yielded 97 potential studies and the final review incorporated 10 articles.
Results: A total of 10 investigation articles of interest were found, all written within the last 3 years, all of them original studies, being 4 randomized studies. The majority investigated machine learning models applied to urodynamic studies (n=5), followed by uroflowmetry (n=4) and videourodynamics (n=1).
Moreover, 5 studies investigated AI capacity for a non-specific scenario, being 4 studies specific for detrusor overactivity detection and one for detrusor underactivity detection. All studied models revealed a diagnostic accuracy that ranged from 78% to 100% and an AUC between 0,73 and 0,919. Models specifically developed to identify DO have shown stronger performances than models evaluating hypoactivity or evaluating the whole urodynamic studies.
Discussion/Conclusions: AI reading and interpretation of Urodynamic studies findings is a potential option in clinical practice to improve the diagnosis and treatment of voiding disorders. However, more investigation is needed to

mature these technologies and assess how they compare to the expert. Economic evaluation studies should also be performed in the future.

CO 13

PROFILAXIA ANTIBIÓTICA NA REMOÇÃO DE CATETER JJ APÓS TRANSPLANTE RENAL: AVALIAÇÃO DE UM PROTOCOLO

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Introdução: Os transplantados renais apresentam um risco elevado de infeções do trato urinário (ITUs), especialmente nos primeiros meses pós-transplante. O uso de cateter ureteral JJ é recomendado para reduzir complicações urológicas, embora possa aumentar o risco de ITUs. A remoção do cateter por cistoscopia é uma intervenção invasiva e as recomendações sobre profilaxia antibiótica nesta situação são escassas.
Objetivo: Avaliação de um esquema de profilaxia antibiótica pré remoção de cateter ureteral JJ em transplantados renais.
Métodos: Estudo prospetivo considerando transplan-tados renais desde janeiro de 2023 a maio de 2024. Excluíram-se doentes com complicações urológicas prévias ou subsequentes à remoção do cateter JJ, doentes neurogénicos, algaliados crónicos e os submetidos a transplantectomia precoce. Uma semana antes da remoção do cateter JJ foi colhida urocultura de jato médio. Em caso de resultado positivo, foi realizada antibioterapia orientada pelo perfil de sensibilidade. Nos casos de urocultura negativa, foi prescrita amoxicilina-ácido clavulânico, ou ciprofloxacina em pacientes alérgicos às penicilinas. O cateter JJ foi removido por cistoscopia flexível em ambiente asséptico. Durante a cistoscopia foi colhida amostra de urina, e removido o cateter JJ com envio da extremidade proximal/renal e distal/vesical do cateter JJ para cultura.
Resultados: Obteve-se uma amostra de 105 transplantados com idade média±desvio padrão de 54.4±11.5 anos. A urocultura pré-remoção do cateter JJ foi positiva em 10.5% (n=11). Foi realizada antibioterapia dirigida com ertapenem em 5.7% (n=6), ceftriaxone em 2.9% (n=3), cefixima em 2.0% (n=2), ceftazidima em 2.9% (n=3) e gentamicina em 1.0% (n=1). Nos restantes, foi usada a amoxicilina-ácido clavulânico em 82.9% (n=87) e ciprofloxacina em 2.9% (n=3). A cistoscopia com remoção do cateter JJ foi realizada 42.4±12.6 dias após o transplante. A urocultura da cistoscopia foi positiva em 8.6% (n=9) com predomínio de Candida albicans e E.coli. A cultura do JJ teve resultados positivos em 60.0% (n=63) na extremidade proximal e 55.2% (n=58) na extremidade distal, com discordância de agentes em 28.6% (n=30) mas com predomínio de E.faecalis e S. epidermidis em ambas as extremidades. Nenhum dos doentes teve ITUs nas primeiras duas semanas pós remoção do cateter JJ. A incidência de ITUs no primeiro semestre após remoção do cateter JJ foi de 11.4% (n=12). Em nenhuma das ITUs a urocultura foi concordante com os achados das culturas obtidas durante a remoção do JJ.
Discussão: A Associação Europeia de Urologia não recomenda profilaxia antibiótica pré-cistoscopia. Contudo, não apresenta recomendações neste contexto de remoção de cateter JJ em doentes transplantados. A manipulação do cateter pode aumentar o risco de bacteriúria neste grupo de doentes suscetíveis a ITUs. Demonstrou-se uma baixa incidência de bacteriúria mas uma elevada colonização do cateter JJ. Obteve-se uma baixa incidência de ITU associada ao procedimento e no primeiro semestre pós-transplante. A avaliação de urocultura pré remoção de cateter para orientar a profilaxia e o esquema de profilaxia antibiótica utilizado parecem ser eficazes na redução das ITUs nos transplantados renais.

CO 14

REVISITANDO AS VANTAGENS DA LITOTRÍCIA EXTRACORPORAL POR ONDAS DE CHOQUE (LEOC)

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Introdução. A litotrícia extracorporal por ondas de choque (LEOC) é considerada uma modalidade de tratamento segura e não invasiva para a litíase renal, cuja eficácia é influenciada por diversos fatores, como as características do doente e propriedades da doença litiásica. Este estudo retrospectivo teve como objetivo investigar a eficácia da LEOC, identificar possíveis preditores de sucesso no tratamento e avaliar o papel da tomografia computadorizada sem contraste (TC) na tomada de decisões para tratamento de cálculos renais e ureterais.
Métodos. Foi realizada uma revisão de casos sucessivamente submetidos a LEOC entre 2020 e 2023, com análise das características demográficas dos pacientes, características dos cálculos (avaliadas através de radiografia de abdómen

[Raio-X])) e as informações adicionais fornecidas pela TC, incluindo a distância pele-cálculo (SSD) e o valor médio de atenuação (MAV) em Unidades Hounsfield (UH). Os critérios de sucesso de tratamento foram avaliados como fragmentação visível do cálculo em Raio-X e a necessidade de tratamento adicional.

Resultados: 307 casos foram analisados. A eficácia da LEOC em termos de fragmentação foi de 85% (261 casos). A taxa de retratamento foi de 37% (n=115), com 73 pacientes sendo submetidos a outra sessão de LEOC (23%). Dos 254 doentes incluídos no estudo, 212 (83,5%) foram tratados exclusivamente com LEOC. O tamanho e a localização do cálculo correlacionaram-se significativamente com o sucesso do tratamento em relação à necessidade de tratamento adicional (p=0,004) e à fragmentação do cálculo (p=0,016), respectivamente. No grupo que realizou estudo com TC, ao contrário da SSD média (p=0,462), o MAV (p=0,016) correlacionou-se significativamente com a ausência de necessidade de tratamento adicional. Não houve correlação entre a fragmentação ou a necessidade de tratamento adicional e a realização de uma TC antes da LEOC (p=0,521, p=0,236).

Conclusão: A LEOC continua a ser uma opção não-invasiva eficaz no tratamento da Litíase Renal. Os resultados deste estudo destacam a importância de seguir as diretrizes estabelecidas, como as delineadas pela Associação Europeia de Urologia (EAU), que priorizam o tamanho e a localização dos cálculos na tomada de decisões de tratamento. Embora a SSD e MAV, avaliadas em estudo de TC, possam fornecer informações relevantes em casos ambíguos, os nossos resultados sugerem que os benefícios adicionais podem não superar a simplicidade de estudo dos doentes apenas com ecografia e Raio-X, retirando exposição desnecessária à radiação da TC. O tamanho, a localização do cálculo e MAV foram identificados como preditores significativos do sucesso da fragmentação da LEOC, relevando a sua importância no processo de tomada de decisão clínica para o tratamento de litíase renal e ureteral.

CO 15

DENSIDADE DE PHI COMO MARCADOR DE CANCRO DA PRÓSTATA CLINICAMENTE SIGNIFICATIVO

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Introdução: O Prostate Health Index (PHI) é um biomarcador preditivo de biópsia prostática positiva. A maioria da evidência refere-se à sua utilização em casos com valores "cinzentos" de PSA (4-10 ng/mL) e toque rectal negativo. O nosso centro iniciou a utilização deste marcador em doentes com suspeita de cancro (Ca) da próstata. O objetivo deste estudo é avaliar e comparar a sensibilidade preditiva do PHI e da densidade do PHI (PHId) com o PSAt (PSA total) e densidade de PSA (PSAd), em doentes com valores de PSA mais vastos, para a deteção de Ca da próstata clinicamente significativo (csPCa).

Métodos: Realizamos um estudo prospectivo unicêntrico. Os critérios de inclusão foram os seguintes: homens com indicação para realização de biópsia prostática transrectal (duplo sextante, com ou sem fusão cognitiva) após avaliação em consulta de Urologia no nosso Centro, por suspeita de Ca da próstata, que realizaram este exame entre o período de junho a dezembro de 2023. A maioria dos doentes realizaram Ressonância Magnética Multiparamétrica da Próstata (RMMP). Admitimos os seguintes critérios de exclusão: valor de PSAt abaixo de 1,5 e acima de 25 ng/ml, história prévia de Ca da próstata, tratamento com finasterida ou dutasterida, e doentes com infeção do trato urinário à data da biópsia.

Antes da biópsia, foi colhido estudo analítico para avaliação do valor de PSA e cálculo de PHI. Após obtenção e análise do PSAt, PSAl e p2PSA, o PHI foi calculado com a fórmula (p2PSA/fPSA) x √tPSA. A dPHI foi calculada através da divisão do valor de PHI pelo valor de volume prostático calculado em RMMP. Quando a RMMP não foi realizada, foi utilizado o valor de volume prostático obtido por ecografia prostática transrectal.

Para avaliar e comparar a sensibilidade para diagnóstico, foram calculados os valores de AUC (A*rea Under the Curve)* da curva ROC (*Receiver Operating Characteristics*). Estes testes foram realizados para a amostra global e para as seguintes subamostras: doentes com ou sem toque retal suspeito. O programa utilizado foi o SPSS versão 29.0.0.0 (241).

Resultados: Dos 102 doentes incluídos, 74 (72.5%) foram diagnosticados com csPCa. Em termos de sensibilidade de diagnóstico de csPCa, o PHI e PHId superaram o PSA e PSAd no coorte geral e em ambos os subgrupos. O melhor resultado em termos de área da curva ROC foi obtido no subgrupo de doentes com toque retal positivo, tanto em relação ao PHI (AUC=0.776) como PHId (AUC=0.789). O melhor valor de sensibilidade de PHId foi obtido no grupo com toque retal negativo (sensibilidade=98.1%). De relevar que o valor de PHId e PSAd no coorte geral (AUC=0.739 e AUC

0.709, respetivamente) e em ambos os subgrupos (toque retal negativo: AUC=0.712 e AUC=0.680, respetivamente; toque retal positivo: AUC=0.789 e AUC=0.796, respetivamente) foram mais elevados do que os valores de PHI e PSA no coorte geral (AUC=0.705 e AUC 0.559, respetivamente) e em ambos os subgrupos (toque retal negativo: AUC=0.674 e AUC=0.591, respetivamente; toque retal positivo: AUC=0.776 e AUC=0.599, respetivamente).

Conclusão: O PHI e o PHId superam o PSA na deteção do csPCa, não só na "zona cinzenta" de valores de PSA com toque retal negativo, como documentado na literatura, mas também numa gama mais alargada de valores de PSA. Existe a necessidade de estudos prospetivos para estabelecer um limiar de valores de PHI e PHId validado e a sua incorporação nos calculadores de risco. O cálculo do volume prostático, preferencialmente em ressonância magnética, revela-se importante para o cálculo dos valores de densidade de PHI, que também se revelam de maior sensibilidade para deteção de csPCa.

CO 16

QUE DOENTES IRÃO BENEFICIAR DE TRATAMENTO ADJUVANTE COM PEMBROLIZUMAB EM PORTUGAL?

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Introdução: O Carcinoma de Células Renais tipo célula clara (CCRcc) é o subtipo histológico de neoplasia renal mais prevalente, representando cerca de 70% de todas as neoplasias do rim. A nefrectomia, parcial ou radical, corresponde ao tratamento *gold-standard* para a doença localizada ou localmente avançada. Contudo, cerca de 50% dos pacientes irão apresentar recorrência após a cirurgia.

Atualmente, de acordo com as guidelines da EAU, o tratamento adjuvante com Pembrolizumab melhora a sobrevida livre de doença, segundo critérios de estratificação de risco de recorrência pelo estudo KEYNOTE-564.

Métodos: Estudo retrospectivo multicêntrico que incluiu todos os doentes com mais de 18 anos de idade submetidos a nefrectomia (parcial ou radical) por suspeita de neoplasia renal em três centros terciários entre 2015 e 2020. Foram recolhidos dados demográficos, tipo de cirurgia, histologia do tumor, estadio patológico e margens cirúrgicas. Com base nos critérios definidos no estudo KEYNOTE-564, selecionamos os doentes que teriam indicação para realizar tratamento adjuvante com Pembrolizumab, e desta coorte foram analisados dados relativos a função de órgão, metastização ao diagnóstico, recidiva, tratamento adjuvante, tempo de follow-up e morte.

São objetivos do estudo: 1) definir e caracterizar os doentes que irão beneficiar de Pembrolizumab de todas as nefrectomias realizadas por suspeita de carcinoma renal; 2) dos doentes com indicação para Pembrolizumab: definir a sobrevivência livre de doença, a sobrevivência global e a sobrevivência específica. O cálculo da mediana de sobrevivência e estimativas de sobrevivência aos 24 meses foram obtidos pela análise das curvas de Kaplan-Meier, com o programa SPSS, versão 29.0.0.0 (241).

Resultados: Entre 2015 e 2020, 596 doentes foram submetidos a nefrectomia nos 3 centros terciários. 328 (55,1%) doentes tiveram resultado anatomopatológico de CCRcc. De acordo com a estratificação de risco de recorrência do estudo KEYNOTE-564, os doentes de baixo risco (n=168), estadio M1 (n=5), e margens cirúrgicas positivas (n=8) foram excluídos. Assim, a amostra com potencial indicação para terapêutica adjuvante contemplou 75 doentes (12.6%).

Este coorte apresenta uma mediana de idade de 66 anos (âmbito 38 - 86). 53 doentes são do sexo masculino (70.7%) e 47 ECOG 0 (62.7%). 70 foram submetidos a nefrectomia radical (93.3%), e 5 a nefrectomia parcial (6.7%). Quanto à histologia, 9 dos tumores CCCRcc têm características sarcomatóides (12%). Quanto à categoria de risco, 65 doentes apresentam risco intermédio a alto (86.7%) e 10 doentes apresentam risco alto (13.3%).

O tempo médio de seguimento foi 49 meses. Foram evidenciados 27 eventos de recorrência (35%) e 32 mortes (42.7%), 19 das quais doença-específica (25.3%) Esta análise foi realizada também em grupos separados conforme existência de terapêutica adjuvante com Inibidores da Tirosina Quinase (TKI), visto que 20 doentes realizaram terapêutica adjuvante com TKI (33.3%).

Do coorte total (n=75), a mediana de sobrevivência livre de doença não foi atingida; a estimativa de sobrevivência livre de doença aos 24 meses é de 76%. A mediana de sobrevivência global é de 87 meses ((63.5 - 78.6, Erro-padrão [E.p.] 12) e estimativa de sobrevivência global aos 24 meses de 78.5%. A mediana de sobrevivência específica não foi atingida, e a estimativa aos 24 meses é de 79.7%.

Do grupo com terapêutica adjuvante com TKI (n=20), a mediana de sobrevivência livre de doença é 26 meses (16.6 - 44.1, E.p. 4.762), a mediana de sobrevivência global é 54 meses (30.5 - 74.8, E.p. 11.979), e a mediana de sobrevivência específica é 56 meses (30.7 - 77.9, E.p. 12.932). Os valores de estimativa de sobrevivência aos 24 meses são de 51%, 72,2% e 72.2%, respetivamente.
Do grupo sem terapêutica adjuvante (n=55), as medianas de sobrevivência livre de doença e sobrevivência específica não foram atingidas. A mediana de sobrevivência global é de 87 meses (70.9 - 87.0, E.p. 8.173). A estimativa de sobrevivência aos 24 meses são de 81.7%, 76.5% e 84.8%, respetivamente.
Conclusão: Este é o primeiro estudo multicêntrico em Portugal que define um coorte de doentes com indicação para a nova terapêutica adjuvante com Pembrolizumab em doentes com CCRcc. A incidência de CCRcc neste coorte é inferior à documentada na literatura. As características deste coorte não permitem uma comparação direta com os dados do KEYNOTE-564, existindo a necessidade de estender a coleta de dados a outros centros hospitalares, por um período de tempo mais longo. A obtenção deste grupo-controlo é necessária para o estudo do impacto desta nova terapêutica adjuvante em doentes com CCRcc em Portugal.

CO 17

ERECTILE FUNCTION OUTCOMES FOLLOWING SURGICAL SHUNTING FOR ISCHEMIC PRIAPISM: A RETROSPECTIVE STUDY

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Introduction: Priapism is defined as a persistent penile erection that continues 4 hours beyond and is unrelated to sexual stimulation. Ischaemic priapism accounts for more than 95% of the cases and constitutes a urologic emergency. Although initial management with aspiration, saline irrigation and administration of sympaticomimetic drugs can successfully manage most cases, about 20% of patients need surgical intervention for a shunting procedure. Prompt treatment is key to preventing irreversible complications such as erectile dysfunction due to fibrosis of the corpora cavernosa.
Objective: The objective of this study was to evaluate the impact of surgical shunting procedures on sexual function in patients treated for ischemic priapism.
Patients and methods: A retrospective review of clinical records was conducted for patients who underwent surgical treatment for ischemic priapism at a tertiary care center between 2017 and 2024. Patient demographics, clinical outcomes, and changes in the International Index of Erectile Function (IIEF-5) scores were analyzed.
Results: A total of 18 patients were included in the study, with a mean age of 48 years (range: 27-70 years). The duration of priapism ranged from 2 to 120 hours, with a mean duration of 38.4 hours. Medication-related causes accounted for 50% of cases, with trazodone being the most commonly implicated drug (55%). Of the 18 patients, 12 were available for postoperative assessment of IIEF-5 scores. The mean preoperative IIEF-5 score was 24.25 (range: 21-25). All patients underwent distal shunting procedures, with the Al-Ghorab shunt employed in 44% of cases. Postoperatively, the mean IIEF-5 score was 14 (range: 5-25), with only 3 patients reporting normal erectile function. One patient required penile prosthesis implantation, which resulted in satisfactory outcomes.
Conclusion: Surgical shunting procedures for ischemic priapism are associated with a high incidence of postoperative erectile dysfunction. While these procedures are effective in providing symptomatic relief, the preservation of erectile function is often limited. These findings underscore the need for a more proactive approach, including consideration of early penile prosthesis implantation in selected patients to optimize long-term sexual outcomes.

CO 18

PERIOPERATIVE AND ONCOLOGICAL OUTCOMES IN RADICAL CYSTECTOMY

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Introduction: Open radical cystectomy has been well-established over decades as the standard treatment for muscle invasive bladder cancer, with consistent outcomes. However, the rate of complications, in spite of updated protocols for the perioperative management, remains high. Robotic assisted minimally invasive surgery offers the advantage of reduced blood loss, smaller incisions, less pain, faster recovery, and shorter hospital stay across various surgical procedures. There is, however, limited data regarding its performance in radical cystectomy.
Objective: To compare perioperative and oncological outcomes in patients undergoing radical cystectomy for bladder cancer, using the open versus robot-assisted approach.

Patients and methods: This is a retrospective single center analysis of patients who underwent radical cystectomy in a tertiary hospital, between January 2022 and May 2024, by either an open approach or a robot-assisted laparoscopic technique. Clinical records were reviewed to collect data on surgical times, length of hospital stay, transfusion rates, and postoperative complications. Oncological outcomes were assessed by evaluating margin positivity, lymph node yield, and the rate of early recurrence of the disease.

Results: Overall, a total of 60 patients were included in the analysis. The median age was 73 years (range 33-86) and 84% were male. 40 patients underwent open radical cystectomy and 20 the robot-assisted approach. The mean length of hospital stay was 25 days for the open approach, with mean blood losses of 950ml and 67.5% of patients undergoing transfusion. 4 patients had major complications and 21 had minor complications, with 11 requiring another surgery to address those complications. The patients undergoing the robot-assisted radical cystectomy stayed in the hospital for a mean of 12 days, lost 350ml of blood during the surgery, with 15% requiring a transfusion. There was a total of 1 major complication and 10 minor complications, with one patient requiring another intervention. The perioperative (<1 month) mortality was 5% in both groups. Regarding the oncological outcomes, 25% of patients submitted to the open radical cystectomy had positive surgical margins in the specimen, and the mean lymph node count was 7. 13 had progression of the disease before one year, which represents 35.1% of the patients in the group. The robot-assisted group had a positivity of surgical margins of 20%, with a mean of 11 lymph nodes found in the surgical specimen. 26.3% (N=5) of these patients had an early recurrence of disease.

Conclusion: Our experience with robot-assisted laparoscopic radical cystectomy appears to be favorable in several perioperative parameters, as well as in the pathologic evaluation of the surgical specimens. The rate of early recurrence of disease was also lower in the robot-assisted group. Larger studies with extended follow up are needed to better establish these findings and understand potential impacts on survival.

Keywords: bladder cancer; radical cystectomy; robotic cystectomy; open cystectomy; minimally invasive.

CO 19

PRIAPISM AFTER A CERVICAL TRAUMA IN A CANYONING ACTIVITY - A CASE REPORT

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Introduction: riapism consists in a prolonged erection not related to sexual desire or stimulation, which generally involves the *corpora cavernosa.* The most frequent causes are medications and sickle cell anemia. However, priapism could be appear in a cervical trauma scenario with spinal cord injury (SCI) and in cases of lumbar spinal stenosis. A cervical trauma could lead to a spinal cord transection with an intensification in parasympathetic activity causing a uninhibited penile arterial blood flow.

Case description: A 43-year-old male patient was brought to the emergency department (ED) after a cervical trauma in water sports activity known by canyoning. Physical examination revealed a patient conscious and oriented patient, Glasgow Coma Scale (CGS) 15, hemodynamically stable but with low cardiac rate with motor and sensitive abnormalities below C5 spine-level and priapism. The head and cervical computed tomography (CT) revealed a fracture of C5 vertebrae. After 2 hours in ED the patient suffered a worsening of his general condition, decreasing CGS to 8, which motivates a tracheal intubation with mechanical ventilation, a central venous catheter (CVC) and aminergic support. The neurosurgery team stabilized the C4-5 fracture-dislocation with unilateral facet interlocking. The urology department was consulted 10h after the admission with a complaint of persistent erection. Further, examination revealed no evidence of trauma to the pelvis, perineal or genital area. A full blood count, liver, renal and thyroid function tests and serum electrolytes were normal. No sickle cells were detected on the peripheral smear and a tox screen was negative. Penile corporal blood gas analysis demonstrated a high-flow non-ischemic priapism with pH 7.44, pCO_2 34.5 mmHg, and pO_2 95.6 mmHg. It was decided to manage the patient conservatively. The priapism resolved spontaneously 24h after onset. The patient reported no further episodes of priapism and demonstrable some improvement in motor and sensory function at follow-up 1 month later.

Discussion: After an head and spine trauma, the patient could present priapism immediately after the event, in an acute phase, or could appear in a

chronic presentation by recurrent priapism episodes, which is less frequent. The priapism that appear after the SCI in nonischemic and could last up to 30 hours but is usually self-limiting. A sudden loss of sympathetic tone to the pelvic vasculature causes an increase in the parasympathetic tone and uncontrolled arterial blood flow into the penile sinusoidal spaces. Causes of low-flow priapism should first be excluded routinely since delayed intervention for low-flow ischemic priapism may result in permanent corporal fibrosis, cellular damage and permanent impotence. Most high flow cases are managed conservatively because of the high likelihood of resolution and the low rate of causing long-term erectile dysfunction.
In the recurrent priapism episodes, one of the treatment options is the intrathecal baclofen (ITB) which is injected directly into the subarachnoid space.
Conclusion: Priapism after SCI is an extremely rare condition, but it could be present in every head and spine trauma. When it happens hours after the incident, in an acute phase, generally is self-limiting and does not cause long-term erectile dysfunction.

CO 20

CORPOROPLASTIA DE ALONGAMENTO COM TACHOSIL? NA DOENÇA DE PEYRONIE - A EXPERIÊNCIA DE UM CENTRO

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Introdução: A Doença de Peyronie carateriza-se por encurtamento e curvatura peniana adquirida resultante da formação de placas fibróticas. Em curvaturas moderadas-a-grave e/ou complexas a corporoplastia de alongamento com a utilização de enxerto é a técnica cirúrgica mais usada, embora ainda não haja consenso sobre qual o melhor enxerto. O TachoSil? é uma matriz selante de fibrinogénio e trombina com utilização crescente nesta cirurgia pela facilidade de utilização.
Objetivos: Avaliar a utilização de TachoSil? em pacientes submetidos a corporoplastia de alongamento num centro, descrevendo os resultados funcionais, complicações pós-operatórias e satisfação dos pacientes.
Material e métodos: Foram incluídas todas as cirurgias de corporoplastia de alongamento com TachoSil? sem colocação de prótese peniana num centro. Foi realizada corporoplastia de alongamento através de incisão subcoronal com ou sem circuncisão. Efetuou-se uma incisão bilateral da fáscia de Buck com disseção do feixe vasculo-nervoso dorsal do pénis, induzida ereção artificial e realizada incisão em I ou Y de acordo com a curvatura e efeito de ampulheta. No final foi realizado penso compressivo peniano, que foi removido após 2 a 5 dias. Posteriormente foi prescrito tadalafil 5 mg diário. Os doentes foram re-avaliados ao fim de 1 semana, 3, 6 e 12 meses. Foram recolhidos dados demográficos, antecedentes pessoais, função erétil, características da curvatura e da placa fibrótica, complicações e resultados cirúrgicos. Posteriormente à cirurgia foram aplicados três questionários: IIEF-15, EDITS modificado e um questionário complementar de satisfação.
Resultados: Entre Junho de 2017 e Junho de 2024 foram operados 31 doentes. A idade média foi de 58,38 ± 5,24 anos. A comorbilidade mais frequente foi a hipertensão (38.7%). O comprimento prévio do pénis foi de 10,69 ± 1,86 cm. A mediana do ângulo da curvatura peniana foi 90º (70-90). A maioria das curvaturas era dorsal (67,7%), proximal (38,7%) e 32,3% tinha defeito em ampulheta. Na maioria dos doentes foi usada uma incisão em Y (51,6%) e a área de defeito foi de 540,0 ± 159.5 cm^2. Em relação a complicações cirúrgicas houve dois hematomas ligeiros, não se tendo observado infeções. Após a cirurgia, a mediana do IIEF-5 baixou de 23 (22-24) para 20 (17-22). 32,3% dos doentes apresentaram disfunção erétil no pós-operatório e 29,0% estavam medicados com iPDE5. Apenas um caso (3.2%) necessitou da colocação de prótese peniana. A maioria (73,1%) dos doentes reportou correção da curvatura, 38,5% reportaram hipostesia da glande. Apesar de quase todos doentes referirem uma diminuição do comprimento do pénis, dos 15 doentes com medições pré e pós cirurgia apenas 1 teve efetivamente uma diminuição.
No que concerne à satisfação, a maioria sentiu-se pelo menos moderadamente satisfeito e consideravelmente satisfeito com a cirurgia (63,6%). A maioria (59,1%) sentiu-se mais confiante na atividade sexual. Cerca de metade (52.6%) dos parceiros sexuais ficaram satisfeitos com a cirurgia. A maioria, 69,2% e 65,2% repetiria a cirurgia e recomendaria a cirurgia a um amigo, respetivamente. Em relação à vida sexual, 40,9% ficou mais satisfeito, 31,8% igualmente satisfeito e 27,3% menos satisfeito.
Discussão/Conclusões: Os nossos resultados são positivos, especialmente no que se refere à correção da curvatura peniana, complicações pós-operatórias e satisfação dos pacientes. Embora a maioria dos pacientes tenha relatado correção da curvatura peniana, a taxa de complicações como redução da rigidez e sensibilidade peniana foi significativa. Além disso, a perda subjetiva de

comprimento peniano, apesar de não ter sido objetivamente documentada na maioria dos casos, parece ser uma preocupação recorrente entre os pacientes. Estes resultados estão de acordo com a literatura disponível. Este enxerto demonstrou bom desempenho em termos de correção da curvatura e uma baixa incidência de disfunção erétil pós-operatória, mesmo em doentes com curvaturas graves.

CO 21

UMA DÉCADA DE CISTECTOMIA RADICAL: O DUELO ENTRE A ABORDAGEM ABERTA E LAPAROSCÓPICA

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Introdução: A cistectomia radical (CR) com linfadenectomia pélvica é o tratamento *goldstandard* para o cancro da bexiga músculo-invasivo ou não músculo-invasivo de alto risco. A cistectomia radical laparoscópica (CRL) tem ganhado popularidade devido às suas vantagens, como menor perda de sangue, menos complicações pós-operatórias e menor tempo de internamento, mantendo uma segurança oncológica comparável à cistectomia radical aberta (CRA).
Objetivos: Comparar as complicações pós-operatórias, resultados oncológicos, sobrevida global (OS) e sobrevida livre de doença (DFS) entre doentes submetidos a CRA e CRL.
Material e métodos: Foi realizada uma análise retrospectiva dos doentes submetidos a CR entre janeiro de 2014 e março de 2024, num hospital distrital. Foram analisados 204 doentes, tendo-se excluído 23 por a indicação da CR ser salvação/paliação. A análise estatística foi efetuada com o software SPSS v.29.0.2.0. As variáveis categóricas foram comparadas com o teste Qui-quadrado ou o teste exato de Fisher e as contínuas com o teste-T. A regressão logística binária foi utilizada para associar a via de abordagem ao risco de complicações pós-operatórias. A OS e DFS foram calculadas com as curvas de Kaplan-Meier e o teste Log-rank.
Resultados: Dos 181 doentes analisados, 119 foram submetidos a CRA e 62 a CRL. A idade média foi de 73 anos (CRA) vs 70 anos (CRL) (p=0,07). O índice de comorbidade de Charlson (ICC) foi diferente entre os grupos (p=0,01), com 59% dos doentes da CRA e 29% da CRL apresentando ICC≥6. A indicação cirúrgica mais comum foi o estádio clínico T2 em ambos os grupos. O tempo do procedimento foi superior na CRL (318 vs 278 min na CRA) (p<0,01). As complicações intra-operatórias foram semelhantes (11% na CRA vs 9,7% na CRL), sendo a lesão vascular mais frequente na CRA (8,4% vs 0%) e a lesão do reto na CRL (4,8% vs 0%). A necessidade de transfusão foi menor na CRL (p<0,01). Não houve diferença no tipo de derivação escolhido. A taxa de doença extravesical ≥pT3 foi similar entre os grupos (56% na CRA vs 53% na CRL). As margens cirúrgicas foram negativas em cerca de 80% nos dois grupos. O tempo de internamento foi menor na CRL (15 dias vs 18 dias), embora sem diferença estatisticamente significativa. Em termos de complicações pós-operatórias, a infecção da ferida operatória foi 34% menos frequente na CRL (p=0,027). A CRA apresentou mais complicações Clavien-Dindo grau ≥ III (p=0,05) e maior mortalidade no pós-operatório (7,6% vs 0%, p=0,029). A CRL teve maior taxa de aperto da anastomose uretero-ileal (p=0,013) e o risco de internamento a 90 dias foi duas vezes superior na CRL (p=0,027). OS e DFS foram semelhantes entre os grupos (p=0,992 e p=0,242), com uma OS de 55% na CRA e 50% na CRL aos 3 anos. O tempo médio até recidiva foi de 66 meses na CRA e 53 meses na CRL. No entanto, no estádio T4, a OS aos 3 anos foi de 49% na CRA e 10% na CRL, com uma diminuição significativa da DFS na CRL.
Discussão/Conclusões: A CRL demonstra ser uma alternativa válida à CRA com bons resultados perioperatórios. Embora as complicações pós-operatórias não apresentem diferenças estatísticas significativas, à excepção do ileus, todas ocorreram em menor percentagem na CRL. A segurança oncológica da CRL é comparável à da CRA, encorajando a sua práctica. No entanto, para casos de doença localmente avançada, a CRL pode afetar negativamente os resultados oncológicos. Ressalva-se o facto de os volumes das amostras assim como os ICC serem diferentes nos dois grupos, o que pode ter contribuído para um viés na avaliação e comparação de resultados.

CO 22

POTENTIAL ROLE OF LUSO'S NATURAL MINERAL WATER ON UROLITHIASIS

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Introduction: Ingestion of natural mineral water (NMW) contributes to important mineral intake which might explain their extensive use in human nutrition with acknowledged health benefits, particularly related to an anti-inflammatory effect[1,2]. Increasing reports have demonstrated the influence

of gut and, more recently, of the urinary tract-derived microbiota, on inflammation-associated diseases, including urolithiasis[3]. Kidney stones are mostly composed of calcium oxalate (CaOx), as a result of chemical and mineral component burden as well as other sources of inflammatory stimuli, followed by reactive oxygen species generation, inducing renal epithelial cell damage and CaOx crystal deposition[4]. Evidence from in vitro and in vivo studies have demonstrated that anti-inflammatory macrophages (M2 phenotype) suppress CaOx crystals deposition by phagocytosis along with inflammation inhibition[4,5].

Objectives: Investigate the empirically recognized antiurolithiatic properties of LUSO NMW (a hyposaline water), by exploring its 1) anti-inflammatory properties; 3) role in the formation and clearance of experimental kidney stones; 2) effect on the biofilm formation of bacteria, representative of the human gut and urinary tract.

Methods: 1) The murine macrophage cell line (RAW 264.7) was cultured in normal culture medium (Control, Ctr) or LUSO NMW-containing medium (collected directly from the Spring (S) or Bottled (B)), in the absence or presence of Lipopolysaccharide (LPS; 100 ng/mL), as an in vitro model of inflammation. We evaluated 1.1) cellular metabolism (Resazurin assay); 1.2) M1 pro-inflammatory and M2 anti-inflammatory profile (Flow cytometry); 1.3) NF-kB nuclear translocation (Confocal microscopy); 1.4) inflammatory and antioxidant gene expression (real-time RT-PCR) and protein levels (Western-blotting); 1.5) nitric oxide (NO) (Griess assay) and inflammatory cytokines secretion levels (ELISA); 1.6) phagocytic capacity (Flow cytometry).

2) LUSO NMW effect on calcium oxalate (CaOx) crystal formation was evaluated through the previously established in chimico assays, crystal nucleation[6] (i.e., when dissolved substances in a supersaturated solution spontaneously crystallize) and aggregation[7] (when numerous crystals in the solution adhere to form large crystal agglomerates). Optical density (OD) of salt mixtures in the absence (Ctr) or presence of LUSO NMW was read at 620 nm and % of inhibition was calculated with the formula $(1-(OD_{Ctr}/OD_{NMW}))x100$.

3) *Escherichia coli*, *Bacillus subtilis* and *Enterococcus faecalis* bacteria were plated in a 96-well plate and maintained in Luria-Bertani broth, prepared with deionized water (Ctr) or LUSO NMW. The fixed biofilms were stained with crystal violet and the OD read at 595 nm.

Results: LUSO NMW increased macrophage metabolism, decreased phagocytosis, and increased the expression of the anti-inflammatory M2 marker, CD163. In an inflammatory context (with LPS), LUSO NMW decreased *Il6* gene expression, pro-IL-1β protein levels, and IL-1β, IL-6 and TNF-α secretion levels. In contrast, LUSO NMW-exposed cells exhibited higher mRNA and protein levels of the antioxidant enzyme HMOX1. Moreover, LUSO NMW enhanced LPS-induced phagocytosis, compared to Ctr cell cultures. In chimico, LUSO NMW inhibited CaOx crystal formation (nucleation), though without effect on crystal aggregation. Although preliminary, LUSO NMW seemed to promote the biofilm of *E. coli* and *B. subtilis* (only by S), while *E. faecalis* biofilm formation was reduced by B NMW.

Conclusions: Overall, these results validate the anti-inflammatory effect of LUSO NMW and support its antioxidant potential. The increased phagocytic capacity of LUSO NMW-exposed macrophages when challenged with an inflammatory stimulus, along with a reduction in CaOx crystal formation highly suggests that LUSO NMW prevents the occurrence of kidney stones. Importantly, LUSO NMW appeared to modulate bacteria biofilm formation in vitro, which should be carefully investigated.

CO 23

COMPLICAÇÕES PÓS-OPERATÓRIAS NA CISTECTOMIA RADICAL: FACTORES DE RISCO E IMPACTO NA SOBREVIDA

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Introdução: A cistectomia radical (CR) com linfadenectomia pélvica é o tratamento goldstandard para o cancro da bexiga músculo-invasivo e não músculo-invasivo de alto risco. Acarreta uma mortalidade de 1-4% e uma morbilidade de 30-60%.

Objetivos: Avaliar a incidência de complicações pós-operatórias a 30 e 90 dias, em doentes submetidos a CR, e identificar potenciais fatores de risco perioperatórios que possam aumentar a probabilidade de tais complicações.

Material e métodos: Analisámos retrospectivamente 204 doentes submetidos a CR entre janeiro de 2014 e março de 2024, num hospital distrital. A análise estatística foi efetuada com o software SPSS v.29.0.2.0. As variáveis categóricas foram comparadas com o teste Qui-quadrado ou o teste exato de Fisher e as contínuas com o teste-T. A regressão logística binária foi utilizada para prever o risco de diferentes variáveis nas complicações

pós-operatórias. A sobrevida global (OS) foi calculada com as curvas de Kaplan-Meier e o teste Log-rank. Para todas as análises, um p≤0,05 foi considerado estatisticamente significativo.

Resultados: A taxa de complicações a 30 dias foi de 44% e a 90 dias de 57%. Complicações Clavien-Dindo (CV) grau I-II ocorreram em 28,9%, grau III em 13,3%, grau IV em 5,5% e grau V em 8,8%. Os doentes com complicações tiveram um internamento médio mais longo (p<0,001): 26,4 vs 10,8 dias. Quanto às complicações a 30 dias, observámos um risco 2 vezes superior no sexo masculino (p=0,014), bem como naqueles com índice de comorbilidade de Charlson (ICC)≥6 (p=0,002). Identificámos ainda uma maior prevalência em doentes com DPOC (p=0,019) e em doentes nos quais ocorreu uma complicação intra-operatória (CIP) (p=0,001). O ileus pós-operatório (incidência de 26%) foi mais comum em doentes com hipertensão arterial (HTA) (p=0,037) e ICC≥6 (p=0,047). A neobexiga foi a derivação urinária mais associada ao ileus (p<0,001), aumentando o seu risco em 3 vezes. CIP também aumentou o risco de ileus em 6 vezes (p<0,001). As infeções do trato urinário alto (ITUA) (18,6%) foram mais prevalentes em doentes com ureterostomia cutânea e neobexiga (p<0,001). A deiscência da anastomose intestinal (4,4%) foi significativamente aumentada com CIP, com possível influência da doença renal crónica (DRC) (p=0,040). Complicações na ferida operatória (20,6%) foram mais comuns no sexo masculino (p=0,031), ICC≥6 (p<0,001), na abordagem aberta (p=0,008) e em doentes com transfusões intra-operatórias (TCEin) (p=0,006). CIP aumentou o risco destas complicações em 3 vezes (p=0,043). Evisceração (12,3%) foi associada ao sexo masculino (p=0,045), cirurgia paliativa/salvação (p=0,005), CIP (p<0,001) e TCEin (p=0,003), com o ileus a aumentar francamente o seu risco (p<0,001). Sépsis pós-operatória (8,3%) teve como fatores de risco a HTA (p=0,045) e DRC (p=0,015). O ICC≥6 (p=0,016) e TCEin (p=0,002) também se correlacionaram com esta complicação. As complicações CV ≥III a 90 dias foram mais comuns no sexo masculino (p=0,036) e em doentes obesos (p=0,007), aumentando o seu risco em 5 e 6 vezes, respetivamente. A ITUA a 90 dias foi associada apenas à DRC (p=0,035). O aperto da anastomose aos 12 meses teve como fatores de risco a idade (p=0,040), HTA (p=0,023), obesidade (p=0,050) e ITUA a 90 dias (p=0,043). A quimioterapia neoadjuvante não aumentou o risco de complicações intra-operatórias (p=0,220), nem a 30 dias (p=0,432) ou 90 dias (p=0,834). A redução da OS foi estatisticamente significativa com deiscência da anastomose intestinal (p<0,001), sépsis (p<0,001) e necessidade de re-intervenção (p=0,006).

Discussão/Conclusões: As complicações pós-operatórias após cistectomia radical aproximaram-se das descritas na literatura. Fatores de risco para as complicações precoces mais frequentes incluíram sexo masculino, ICC≥6, HTA, e CIT. As complicações têm um efeito deletério no OS, pelo que é importante minimizá-las. A quimioterapia neoadjuvante não aumentou o risco de complicações.

CO 24

FIRST SERIES OF ROBOT-ASSISTED URETEROPYELOPLASTIES WITH THE HUGO RAS SYSTEM

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Introduction: Ureteropyeloplasty is the gold standard treatment for Ureteropelvic Junction Obstruction (UPJO). In recent years, robot-assisted surgery has emerged as an alternative, offering a minimally invasive approach, greater comfort for the surgeon, and comparable postoperative outcomes. The HUGO™ RAS system by Medtronic® is a promising competitor in robotic urologic surgery.

Objective: This study aims to report the outcomes of the first series of ureteropyeloplasties assisted by the HUGO™ RAS Medtronic® system, performed at the Unidade Local de Saúde de Santo António (ULSSA) since the acquisition of the equipment, approximately 18 months ago.

Materials and methods: Demographic data (sex, age, body mass index - BMI) were analyzed, along with operative time, hospital stay, intraoperative blood loss, complications, and clinical success. The latter was assessed by the recurrence of renal colic and imaging exams, particularly the MAG3 renogram, after the removal of the double J (DJ) stent.

Results: Eight robotic pyeloplasties were performed using the *Anderson-Hynes* technique with the HUGO™ system. Follow-up ranged from 1 to 8 months. Of the patients who underwent surgery, 3 (37.5%) were male, with a mean age of 47.8 (±15.9) years, a mean BMI of 23.9 (± 3.2) kg/m², and an average operative time of 232 (± 18) minutes. Regarding UPJO etiology, three patients (37.5%) had an abnormal crossing vessel as the cause, while the remaining were diagnosed with idiopathic UPJO. Two patients also underwent stone extraction due to concomitant ipsilateral nephrolithiasis.

The median intraoperative blood loss was 50 ml (22.5-53.8), and the median hospital stay was 2 days (2.0-7.0). The median drain removal occurred on the second postoperative day (1.0-2.0). The urinary catheter and the double J stent were removed, on average, on the 4th (±3.3) and 60th (±33.3) postoperative days, respectively.
In terms of intraoperative complications, there was an incorrect placement of the double J stent, which resulted in lumbar pain on the first postoperative day, requiring repositioning. This patient had the longest hospital stay, lasting 10 days.
Regarding clinical success, only one patient (16.7%) experienced a recurrence of renal colic, which improved with medical treatment.
Discussion/Conclusion: Ureteropyeloplasty assisted by the HUGO™ RAS Medtronic® system appears to be a promising approach for treating UPJO. However, further studies are needed to confirm the outcomes of this surgical technique.

CO 25

TRIFECTA AND OTHER OUTCOMES IN OPEN AND LAPAROSCOPIC PARTIAL NEPHRECTOMY: A 10-YEAR EXPERIENCE

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Introduction: Renal cell carcinoma (RCC) accounts for more than 90% of kidney cancers. Partial nephrectomy (PN) is the preferred surgical treatment, especially for T1 renal masses since kidney function preservation lowers the risk of cardiovascular diseases. PN is a technically challenging procedure associated with a high complication rate, up to 30%. In the era of minimally invasive surgery, laparoscopic (LPN) and robotic-PN (RPN) are interesting topics and have shown themselves as non-inferior compared to open PN (OPN). While LPN is already established, RPN has not been fully disseminated due to economic limitations. Trifecta is a well-known outcome measure and is a marker of an effective PN.
Objectives: Our aim was to compare trifecta achievement (TriA) between OPN and LPN and to identify factors influencing the attainment of this outcome.
Materials & methods: We conducted a retrospective observational study of 96 patients who underwent partial nephrectomy (PN) from 2013 to 2023, excluding 8 due to incomplete data or cytoreductive surgery. Trifecta was defined per European guidelines as having no complications, warm ischemia time <25 min, and negative surgical margins. Data analysis was performed with SPSS v.29.0.2.0, using chi-square and T-tests for variable associations. Kaplan-Meier curves assessed distant recurrence-free survival (dRFS), bladder recurrence-free survival (bRFS), and overall survival (OS), with comparisons made using the log-rank test. Statistical significance was set at $p < 0.05$.
Results: Of the 88 patients, 20 (23%) underwent OPN and 68 (77%) LPN. Trifecta was achieved in 14 (70%) of OPN cases and 33 (48.5%) of LPN cases. Approach (OPN vs LPN) was not correlated with TriA (p=0.091). Negative correlations with TriA included male gender (p=0.040), higher neutrophil-to-lymphocyte ratio (NLR) (p=0.031), sarcopenia (p=0.037), greater hemoglobin drop (p=0.042), and lower early postoperative GFR (p=0.016). Mean surgical time inversely correlated with TriA (p=0.005), with no significant difference between OPN and LPN (153 min vs 157 min, p=0.234). Length of stay was longer for those not achieving Tri (p=0.022), as well as in OPN group (8 days vs 5 days, p=0.026). Complication rates were similar between OPN and LPN (p=0.203). Chronic kidney disease progression was not correlated with TriA or surgical approach (p=0.808 and p=0.431). RFS showed no difference between those who achieved Tri and those who did not (p=0.990). OPN and LPN were similar in distant and local RFS (p=0.885 and p=0.166), with LPN showing improved overall survival (OS) (p=0,002).
Conclusions: We found no significant difference in TriA between OPN and LPN. Negative predictors included male gender, higher NLR, sarcopenia, greater hemoglobin drop, and lower early postoperative GFR. Both OPN and LPN showed similar complication rates and RFS. We conclude that LPN is a safe option regarding complications, may improve OS and has shorter lengths of stay.

CO 26

AI FOR URODYNAMIC STUDY INTERPRETATION: ARE AVAILABLE TOOLS READY FOR PRIMETIME?

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Introduction: Machine learning models have proven to be effective in accurately detecting urodynamic phenomena such as detrusor overactivity (DO), detrusor underactivity (DU), along with other urodynamic events, through trace analysis. Recently several artificial intelligence (AI) models have become available for public use. One of the many AI-based tools that has gained

popularity is the Chat-Generative Pre-Trained Transformer (ChatGPT).
Therefore, we aimed to access ChatGPT performance for urodynamic study (UDS) trace interpretation.
Methods: ChatGPT 4o was used. The most recent 50 UDS performed in our institution up until 30th June 2024 were selected, anonymized and reanalyzed by an expert to answer a predefined set of questions. ChatGPT was asked, using a fixed prompt, to analyze a picture of each filling phase trace answering the same questions as the expert, regarding the phase, presence of DO, type of DO, presence of urodynamic stress incontinence (USI) and the presence of rectal contractions (RC). ChatGPT was given a first set of 25 traces, data was analyzed and the most common ChatGPT errors were identified and a prompt identification of the mistakes and their correction was generated. A second sample of 25 traces were then given to ChatGPT under the original prompt for interpretation.
Results: Regarding the first 25 cases, 10 (40%) were traces of men. Mean±SD age of patients was 52,5±18,9 years. ChatGPT correctly identified the phase as filling phase in 88% of the first set. According to expert interpretation, DO was present in 14 (56%) traces – in 6 (24%) traces classified as phasic, 4 (16%) as terminal, and 1 (4%) as both phasic and terminal. ChatGPT correctly classified traces regarding DO in 11 (44%) cases, as it incorrectly identified overactivity in 13 cases (52%), mainly due to valorization of vesical pressure baseline variation matched by the abdominal line. Sensitivity value for DO was 90,9% and specificity was 7,1%. ChatGPT correctly classified 22 (88%) traces regarding USI – sensitivity 80%, specificity 93,3%. As for RC, ChatGPT correctly classified traces in 4 (16%) cases – sensitivity 66 % and specificity 0% - mainly due to incorrectly classifying variations in the abdominal pressure matched by the vesical pressure as RC.
Regarding the second 25 cases, mean age was 53,0±15,3 years and 8 (32%) cases were male.
ChatGPT correctly identified the filling phase in 100% of cases. It correctly classified traces regarding DO in 10 (40%) cases – sensitivity was 66,7%, and specificity was 26,7%. Regarding USI, a correct classification was obtained in 19 traces (76%) – specificity 83%; not able to calculate sensitivity as there were no traces classified has having USI by the expert in this set. As for RC, a correct identification was obtained in 20 cases (80%) – specificity 87%; not able to calculate sensitivity for the same reasons as above described.
Conclusion: Publicly available AI models, namely ChatGPT4o, are not yet reliable for UDS interpretation, as they can achieve high accuracy rates in simple tasks such as phase determination or USI definition, but still misinterpret traces regarding more complex tasks. These tools can be improved by our interaction, as our study shows, and will probably represent a cornerstone of our practice in the near future.

CO 27

ENUCLEAÇÃO PROSTÁTICA: VIA ABERTA *VS* THUFLEP

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Introdução: A hiperplasia benigna da próstata é uma patologia comum e com grande impacto na qualidade de vida dos doentes. O tratamento cirúrgico é um dos pilares do tratamento desta patologia, sendo uma das áreas da Urologia com maior inovação tecnológica. Contudo, a falta de evidência científica que corrobore a superioridade das novas técnicas em comparação com os métodos tradicionais coloca-se, a par da curva de aprendizagem, como um dos principais desafios para o Urologista. Partindo da experiência de um centro em Portugal, este é um estudo retrospetivo que compara a morbilidade peri-operatória entre a prostatectomia aberta e a enucleação com fibra de laser de Thulium (ThuFLEP), avaliando também os *patient-reported outcomes (PROs)* desta última.
Objetivos: Comparar a morbilidade peri-operatória entre a prostatectomia aberta (Millin e Freyer) e a ThuFLEP, e caracterizar os *patient-reported outcomes* da ThuFLEP.
Material e métodos: A partir de um estudo retrospetivo realizado em 2018 no nosso centro que compara a técnica de Millin com a técnica de Freyer (julho 2016 a julho 2018), comparamos os dados obtidos com os resultados da ThuFLEP desde o momento da sua introdução no nosso serviço (fevereiro 2022) até ao momento atual. A obtenção dos dados foi realizada de modo retrospetivo, a partir da consulta do processo clínico eletrónico, sendo recolhidas informações para caraterização da amostra e resultados cirúrgicos. Ademais, os doentes submetidos a ThuFLEP foram entrevistados por telefone após, no mínimo, 90 dias de pós-operatório para recolha de PROs com os questionários IPSS (antes e após cirurgia) e aplicação de questões relacionadas a satisfação/repetição do procedimento e satisfação sexual. O tratamento dos dados foi realizado a partir do programa IBM SPSS Statistics®.

Resultados: Foram incluídos 120 doentes submetidos a prostatectomia aberta e 106 a ThuFLEP. A idade dos doentes foi semelhante no grupo da prostatectomia aberta e da ThuFLEP (70 (13) vs 69 (11), M (IQR), anos). O volume estimado das próstatas foi superior no grupo das prostatectomias abertas (110 (49) vs 82 (30), M (IQR), g). As principais indicações cirúrgicas foram sintomas urinários baixos refractários (48.3% vs 49.1%), algaliação crónica por RUA (24.2% vs 27.4%), litíase vesical (14.2% vs 5.7%) e retenção urinária aguda (4.2% vs 11.3%). O tempo de cirurgia foi superior na ThuFLEP (56 (23) vs 102 (45), M (IQR), min, α <0.001) e a proporção de adenoma removido foi superior na prostatectomia aberta (43.75 (24.1) vs 30.58 (33.7), M (IQR), %). Contudo, o tempo de internamento (5 (3) vs 2 (1), M(IQR), dias, α <0.001) e o tempo de algaliação pós-procedimento (8 (4) vs 2 (1), M (IQR), dias, α <0.001) foi inferior no grupo da ThuFLEP. Não se verificaram diferenças na queda do valor de hemoglobina após o procedimento (1.8 (1.2) vs 1.6 (2.0), M (IQR), g/dL, α=0.423). A taxa de complicações foi semelhante nos dois grupos (30.0% vs 30.1%, α=0.987). As principais complicações foram a hematúria e a ITU associada à instrumentação urológica. No caso particular da ThuFLEP, a prevalência de incontinência urinária de esforço aos 3 meses foi de 16.0%, mas desceu para apenas 1.3% ao fim de 6 meses. Já a prevalência de bexiga hiperativa, foi de 22.7%. Os dados preliminares mostram uma queda significativa no IPSS após a ThuFLEP (22 (10) vs 4 (5), M (IQR)). Entre estes doentes, 88.3% sentem-se satisfeitos, muito satisfeitos ou ótimos com a perspetiva de continuarem a urinar da mesma forma durante o resto da sua vida. Apesar de 58.8% reportarem pioria da função sexual, 97.1% voltariam a repetir o procedimento.

Discussão/Conclusão: A técnica de prostatectomia aberta é mais rápida e associa-se a maiores proporções de adenoma prostático removido. Por outro lado, a ThuFLEP permite tempos de internamento e de algaliação no pós-operatório inferiores. As principais complicações foram a hematúria e a ITU associada à instrumentação urológica, não existindo diferenças nas taxas de complicações. Apesar da escassez de literatura sobre o laser de fibra de Thulium, a bibliografia existente sobre a enucleação prostática por laser de Holmium é corroborada pelos nossos resultados.

CO 28

BEYOND OBJECTIVE DATA: THE PERFORMANCE OF SURGEONS' ASSESSMENTS IN KIDNEY HARVESTING

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Introduction: Kidney graft survival rates have improved due to advances in immunosuppressant therapy, surgical techniques, and better selection of donors and recipients. Various objective data, biomarkers and histological findings are employed to enhance this selection process. Nevertheless, the value of surgeons' clinical impressions is often overlooked in today's digital and AI-driven revolution.

Objective: To evaluate the correlation between surgeons' clinical impressions of donor's clinical features with standard selection criteria.

Materials and methods: A retrospective cohort study was conducted using prospectively collected data from kidney harvests between January 2023 and August 2024. A grading system was developed to evaluate the surgeon's impression of the amount of visceral fat (minimal, normal, or significant), the donor's atherosclerotic grade (none, mild, moderate, or severe) and the graft's macroscopic appearance (categorized as very poor, poor, reasonable, good, or very good; grafts rated as very poor were automatically excluded from transplantation) at harvest. These assessments were analyzed in relation to standard donor selection criteria, such as donor age and the Kidney Donor Profile Index (KDPI), as well as histological analysis.

Results: During the study period, our center conducted 160 kidney harvest surgeries. A total of 250 kidneys were harvested, with 70 kidneys excluded prior to harvest due to clinical criteria like the Kidney Donor Profile Index (KDPI) or imaging results. Out of the 250 harvested kidneys, 38 were excluded based on macroscopic appearance and 54 were excluded after biopsy assessment. Higher acceptance rates were linked to donors with less visceral fat, milder atherosclerotic grades, and better graft macroscopic appearances ($p<0.05$). Specifically, 73.11% of grafts from donors with 'minimal' visceral fat were accepted compared to 27.16% from those with 'significant' fat. Donors with 'none' or 'mild' atherosclerosis had an acceptance rate of 72.61%, whereas those with 'moderate' to 'severe' atherosclerosis had a rate of 33.92%. When examining the macroscopic

appearance of grafts, excluding those initially rejected for macroscopic reasons to avoid bias, the acceptance rate was 35.59% for grafts with 'very poor' to 'reasonable' appearance, compared to 86.13% for those rated as 'good' or 'very good'. Mean donor's age was 62.21 years. Older donors showed a greater amount of visceral fat, greater atherosclerotic grade and worse macroscopic appearance (r=0.332, r=0.511 and r=0.597, respectively, p<0.05). Lower visceral fat was associated with better KDPI scores (r=0.336, p<0.05), and a lower atherosclerotic grade correlated with improved KDPI (r=0.481, p<0.05). Graft macroscopic appearance correlated positively with KDPI scores, with better appearance linked to favorable KDPI (r=0.637, p<0.05).

Conclusion: The study demonstrates that surgeons' clinical impressions of donor kidney characteristics significantly correlate with both standard selection criteria and the acceptance rate of harvested kidneys. These findings underscore the crucial role of clinical expertise as a complementary tool alongside technological and objective methods, contributing to more accurate assessments and optimized outcomes in kidney graft selection and transplantation.

CO 29

THE IMPACT OF SURGEONS' CLINICAL IMPRESSIONS ON SHORT-TERM KIDNEY GRAFT FUNCTION

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Introduction: Kidney graft survival rates have improved due to advances in immunosuppressant therapy, surgical techniques, and better selection of donors and recipients. Various objective data, biomarkers and histological findings are employed to enhance this selection process. Nevertheless, the value of surgeons' clinical impressions is often overlooked in today's digital and AI-driven revolution.

Objective: To evaluate the correlation between surgeons' clinical impressions of donor's clinical features with kidney graft function.

Materials and methods: A retrospective cohort study was conducted using prospectively collected data from all patients who received a kidney graft between January 2023 and August 2024 (n=199). A grading system was developed to evaluate the surgeon's impression of the graft's macroscopic appearance (categorized as very poor, poor, reasonable, good, or very good; grafts rated as very poor were automatically excluded from transplantation), the amount of visceral fat (minimal, normal, or significant), and the donor's atherosclerotic grade (none, mild, moderate, or severe) at harvest. These assessments were analyzed in correlation with short-term kidney function, particularly focusing on creatinine levels at 3 and 6 months post-transplant.

Results: The mean age of recipients was 51.7 years. The average creatinine levels at 3 and 6 months post-transplant were 1.49 mg/dL and 1.56 mg/dL, respectively. The surgeon's impressions of the graft's macroscopic appearance, visceral fat, and donor's atherosclerotic grade at harvest showed significant correlations with graft function at 3 (r=0.364, r=0.215, r=0.177, p<0.05) and 6 months (r=0.364, r=0.255, r=0.212, p<0.05). Kidneys with a "poor" macroscopic appearance had mean creatinine levels of 1.58 mg/dL at 3 months and 1.97 mg/dL at 6 months, compared to 1.23 mg/dL and 1.23 mg/dL for kidneys with a "very good" appearance, p<0.05. Kidneys from donors with "significant" visceral fat showed mean creatinine levels of 1.64 mg/dL and 1.96 mg/dL, whereas those from donors with "minimal" visceral fat had levels of 1.36 mg/dL and 1.39 mg/dL, p<0.05. Regarding atherosclerotic grade, kidneys from donors with "severe" atherosclerosis had mean creatinine levels of 2.26 mg/dL and 2.27 mg/dL, in contrast to 1.42 mg/dL and 1.47 mg/dL for kidneys from donors with "none" atherosclerosis, p<0.05.

Conclusion: Surgeons' clinical impressions of donor kidney characteristics significantly correlate with graft function at 3 and 6 months post-transplant. These findings underscore the persistent importance of clinical expertise, complementing technological advancements in optimizing kidney graft outcomes.

CO 30

DOPPLER ULTRASSOUND AFTER RENAL TRANSPLANT - HERO OR VILLAIN?

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Introduction: Kidney transplantation is the standard treatment for end-stage renal disease, with high success rates. However, early post-transplant complications and their diagnosis are essential to prevent graft failure. Doppler ultrasound plays a crucial role in the postoperative

period for assessing complications and graft function. Nevertheless, in most situations, urine output is a good indicator of graft function and a significant concern is the potential harm that might result from performing postoperative doppler.

Objective: To assess the therapeutic interventions and outcomes following an abnormal postoperative doppler ultrasound in renal transplant patients.

Métodos: Retrospective study including all renal transplantation patients at our institution from January 2021 through December 2022. Demographic data, surgical techniques and parameters were collected. Doppler ultrasound reports from the first hospitalization were reviewed for significant abnormalities (lack of arterial or venous flow, intrarenal resistance index (RI), hydronephrosis, arteriovenous fistulas and fluid collections). Follow-up dopplers of abnormal cases were also reviewed for changes over time. Information regarding any intervention resulting from an abnormal doppler report was collected. Renal function was tracked for up to one year post-transplant. Statistical analysis was performed using SPSS ver. 28.0 (IBM, Armonk, NY, USA).

Results and discussion: Between 2021 and 2022, 185 adult transplants were performed at our center. Regarding donor types, 95.1% were from brain-dead donors. Of the recipients, 69.7% were male with a mean age of 54.3 years and an average body mass index (BMI) of 25.6 kg/m². As for cold ischemia time, 30.8% had between 15 to 20 hours of ischemia, followed by 23.8% with 10 to 15 hours. The average creatinine levels at 1, 3, 6, and 12 months were 1.53, 1.48, 1.43, and 1.42, respectively and 8.1% of recipients lost the graft.

Doppler ultrasound was performed in 107 transplant recipients (57.8%) with the most common reason being the persistence or worsening of azotemia in the postoperative period (56.1%), followed by a drop in hemoglobin postoperatively (19.6%). Postoperative Doppler was most frequently performed on the second day (26.2%).

There was a statistically significant association between BMI and recipients who underwent doppler, as well as between patients with higher creatinine at 1 month ($p < 0.05$). There was no statistically significant association between ischemia time and doppler use during the first hospitalization nor with other sample characteristics such as age, gender, race, or donor type.

Regarding the most common doppler findings: 45,8% had no abnormalities, 17.8% had a fluid collection and 16.8% had an increased resistance index. 37,1% underwent a second doppler with 57,1% showing the same results. Overall, in 89.7% of the cases, no therapeutic changes were made based on the doppler results. Of the patients who required further interventions, 72,7% returned to the operation room but in two cases the diagnostic was not confirmed. A significant concern is the potential harm that might result from performing postoperative doppler: it is possible that these two patients would not have undergone reoperation if doppler had not been performed.

In the early post-transplant period, the RI measured in intrarenal arteries is thought to predict poor kidney graft performance. In this study, there was a statistically significant association between increased RI and graft loss compared to normal RI ($p < 0.05$). However, there was no association between RI and mortality. There was also a statistically significant association between increased RI and the need for postoperative biopsy compared to patients with normal RI ($p < 0.05$).

Conclusion: Doppler ultrasound is crucial as it can help detect early signs of graft dysfunction and complications, leading to improved clinical outcomes in renal transplants. However major interventions such as early surgical revision should not be based solely on doppler results but in the entire clinical scenario to prevent unnecessary procedures.

CO 31

ORCHITIS AND EPIDIDYMITIS IN EMERGENCY DEPARTMENT: A RETROSPECTIVE STUDY ON DIAGNOSIS AND TREATMENT

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Introduction:

Epididymitis is a prevalent condition affecting adult males, with an incidence ranging from 25 to 65 cases per 10,000 men annually. It presents in acute, chronic, or recurrent forms, with acute epididymitis and orchitis being characterized by pain, swelling, and increased temperature of the scrotum. The condition is often caused by the migration of pathogens from the urethra or bladder, with Enterobacterales (typically E. coli), C. trachomatis, and N. gonorrhoeae being the most commonly identified pathogens. Appropriate diagnostics can identify the causative pathogens in up to 90% of patients. Scrotal ultrasound is recommended by the European Association of Urology (EAU) guidelines as the preferred diagnostic tool for acute epididymitis and orchitis, offering greater accuracy than urinalysis alone and aiding in the exclusion of other conditions such as

testicular torsion, which is a critical differential diagnosis in young males. This study aims to evaluate the current diagnostic and therapeutic approaches for managing orchitis and epididymitis in an emergency hospital setting.

Objectives: The primary objective of this study was to assess the management strategies for orchitis and epididymitis in an emergency hospital room, focusing on diagnostic and therapeutic practices. Specifically, the study aimed to evaluate the utilization of diagnostic tools such as scrotal ultrasound, blood tests, and urinalysis, as well as the prescription patterns of antibiotics in both the emergency room and upon discharge.

Methods and materials: This retrospective study reviewed the medical records of 202 patients diagnosed with orchitis and epididymitis in the emergency department between January 2022 and December 2023. Data were collected on the diagnostic methods used, including scrotal ultrasound, blood tests, urinalysis, and urine cultures, as well as the antibiotics administered in the emergency room and prescribed for home treatment. Statistical analysis was conducted using SPSS software.

Results: Out of 202 patients with a mean age of 41 years, 154 (76%) underwent scrotal ultrasound, 132 (65%) had blood tests, 118 (58%) had urinalysis, and only 75 (37%) underwent urine culture. Notably, none of the patients were tested for sexually transmitted infections (STIs). Regarding treatment, 106 patients (52%) received a single dose of antibiotics in the emergency room and were subsequently discharged with oral antibiotics or required hospitalization. The most frequently administered antibiotic in the emergency setting was Ceftriaxone, used in 90 out of 106 patients (84%), followed by Ciprofloxacin, Cefuroxime and Amoxicillin with Clavulanic Acid used in 4 patients each (5%) and Piperacillin/ Tazobactam used in 2 patients (1%).For home treatment, among the 162 patients with accessible prescription data, 88 (54%) received fluoroquinolones, 26 (16%) were prescribed Doxycycline, 20 (12%) received Amoxicillin with Clavulanic Acid, 14 (9%) were given Cefuroxime, 8 (5%) were treated with Azithromycin, and 6 (4%) received Trimethoprim/Sulfamethoxazole.Twenty-eight patients (14%) required hospitalization.

Discussion/Conclusion: The study revealed that the management of orchitis and epididymitis in the emergency hospital setting predominantly relied on scrotal ultrasound for diagnosis, in line with EAU guidelines, though urine culture and STI testing were underutilized. Antibiotic therapy in the emergency room was heavily reliant on Ceftriaxone, with fluoroquinolones being the most commonly prescribed for outpatient care. The lack of STI testing represents a significant gap in adherence to recommended diagnostic protocols, which may impact the appropriateness of antibiotic selection and overall patient outcomes. This study underscores the need for improved adherence to diagnostic guidelines, including STI testing, and a more standardized approach to antibiotic stewardship in the emergency management of epididymitis and orchitis. Future efforts should focus on enhancing diagnostic accuracy and tailoring therapeutic interventions to optimize patient care and reduce the risk of chronic or recurrent disease.

CO 32

IMPACTO DO TADALAFIL NO TÓNUS PURINÉRGICO DA BEXIGA EM DOENTES COM OBSTRUÇÃO INFRAVESICAL

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Introdução: As purinas (ATP, ADP e adenosina) sa~o mediadores importantes na fisiologia da bexiga. Existem cada vez mais evide^ncias que a sinalizac¸a~o purine´rgica esta´ envolvida na fisiopatologia dos sintomas urinários baixos (LUTS) devidos a disfunc¸a~o vesical. Dados recentes da literatura mostram que os doentes com disfunc¸a~o da bexiga por obstrução infravesical (OIV) apresentam maior libertac¸a~o de ATP a partir do urote´lio e do detrusor, elevando as concentrac¸o~es de ATP urina´rio nos doentes obstrui´dos. Na seque^ncia desta constatac¸a~o, foi proposto recentemente que os ni´veis urina´rios de ATP podem ser considerados um excelente biomarcador não-invasivo da competência/ atividade do detrusor em doentes com hipetrofia benigna da próstata (HBP) e fluxos urinários baixos. Os inibidores da fosfodiesterase-5 (iPDE-5) mostraram efica´cia no tratamento dos LUTS. Vários mecanismos de Acão poderão estar envolvidos na melhoria sintomática dos doentes tratados com estes relaxantes da musculatura lisa vascular e vesical.

Objetivos: Comparação dos níveis de ATP, ADP e adenosina em doentes com LUTS e controlos (doentes sem LUTS). Avaliação da concentração de purinas na urina dos doentes antes e após 4 semanas de tratamento com Tadalafil ou Silodosina. Comparação do impacto do Tadalafil com o da Silodosina no tónus purinérgico.

Métodos: Foram randomizados 8 doentes com LUTS sugestivos de OIV por HBP em 2 grupos. Num grupo, os indivíduos foram medicados com tadalafil 5mg/dia e no outro com silodosina 8 mg/dia durante 4 semanas. Foram incluídos doentes com LUTS sugestivos de OIV por HBP com IPSS ≥ 15 no ini´cio do estudo, volume da próstata ≥ 30 ml (conforme avaliado por ecografia) e fluxo máximo <15 ml/seg com base num esvaziamento mínimo de 150 ml. Após consentimento informado e randomização, os indivíduos foram avaliados em 2 momentos: uma avaliação inicial e outra após o período de tratamento com silodosina/tadalafil. Ambas as avaliações consistiram na colheita de urina com criopreservação imediata em azoto líquido para medição dos níveis de ATP por bioluminescência, de ADP e adenosina por HPLC com deteção por fotodíodos e da atividade da desidrogenase do lactato (DHL) por colorimetria. Foram também colhidas urinas de sete controlos (doentes sem LUTS) e medidos os respetivos níveis de ATP, ADP e adenosina.

Resultados: Dos 14 doentes randomizados, um doente abandonou o estudo, não tendo sido submetido à segunda colheita.

A mediana de idades foi de 66,5 anos.

A mediana da concentração de nucleótidos totais na urina dos controlos foi inferior à dos doentes com LUTS (82,3 nM [41,3-265,5] vs 258,0 nM [163,8-415,2]), apesar de não ter sido encontrada diferença estatisticamente significativa.

Não existiu, também, diferença estatisticamente significativa na redução dos níveis de purina em doentes a realizar silodosina ou tadalafil.

A purina que mostrou maior tendência a diminuir com o tratamento instituído foi o ADP, com concentração mediana inicial de 112,8 nM [35,5-201,1] e final de 68,5 nM [56,7-151-6].

Esta tendência de redução com tratamento mantém-se para a avaliação dos nucleótidos totais na urina (concentração mediana inicial de 205,1 nM [82,3-105,2] e final de 113,8 nM [105,2-203,8]).

Discussão e Conclusão: Embora ainda não seja possível tirar conclusões definitivas devido ao reduzido tamanho da amostra, observou-se uma tendência para níveis mais elevados de purinas urinárias em doentes com LUTS causados por OIV, em comparação com os doentes do grupo de controlo. Além disso, verificou-se uma tendência para a diminuição desses níveis, especialmente do ADP urinário, após o início do tratamento com um alfabloqueante ou iPDE-5.

O uso das purinas urinárias como marcador não invasivo de OIV poderá ter o potencial, no futuro, de evitar a necessidade de exames urodinâmicos invasivos para diferenciar entre obstrução infravesical e bexiga hipocontrátil em doentes com LUTS. No entanto, será necessário recrutar e randomizar um maior número de doentes para se obterem conclusões mais robustas.

CO 33

SISE MATERS: A NOVEL APPROACH TO HANDS-ON TRAINING BY THE EUROPEAN ASSOCIATION OF UROLOGY (EAU)

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Introduction: Over the last two decades, the traditional surgical training model has been facing several legal, regulatory and ethical constraints. The increasing number of available surgical technologies has further complicated the situation, making it difficult for residents to achieve proficiency in every technique. This has led to reduced satisfaction with surgical residency programs, and decreased confidence and competence in performing procedures independently at the end of the residency. Simulation training has therefore been used as adjunct to traditional surgical training to help provide additional technical skills. However, for simulation training to be beneficial, it needs to be a valid approximation of clinical practice, included in a structured curriculum, with progressive levels of difficulty. The European Association of Urology (EAU) incorporates low and high-fidelity simulation, enhancing technical skills, decision-making, and cross-border collaboration to complement traditional surgical training in urology.

Objectives: To describe the approach of the EAU to hands-on simulation training.

Materials and methods: The Standardization in Surgical Education Program (SISE) is an educational initiative of the European School of Urology (ESU), and aims to provide high-quality hands-on training to urology trainees through standardized and validated training activities. A series of procedure-specific curricula are being developed using a stepwise approach: a basic step focused on fundamental skills, an intermediate step focused on parts of procedures or basic procedures, and an advanced step focused on full and more complex procedures. The development of each curriculum, overseen by a dedicated working group, follows a

systematic methodology. First, a cognitive task analysis is performed by a small group of experts to deconstruct a specific procedure into its basic steps. Next, a larger group of experts from diverse backgrounds reviews the resulting statements using the Delphi methodology to reach consensus on all aspects of the procedure. Finally, after metrics for the tasks are developed, a validation process is conducted.

Results: The first step of the SISE program is the ESU Urology Boot Camp, an intensive hands-on training course for first-year residents designed to provide technical skills training for the most common urological procedures. Following this, the core of the SISE program will consist of ten parallel curricula: andrology and reconstructive surgery; endoscopic stone treatment; female, functional, and neuro-urology; general open surgery; imaging, focal therapies, and uropathology; laparoscopic training; paediatric surgery; robotic surgery; transplantation; and transurethral treatment. Additionally, a non-technical and soft skills working group will design activities to develop essential non-technical skills relevant to urologists, such as leadership and communication.

Discussion/conclusions: The EAU has developed a comprehensive approach to hands-on training, utilizing standardized and validated simulation methods to enhance the surgical skills of urology trainees.

CO 34

EVOLUÇÃO DO TRATAMENTO DO CANCRO DA PRÓSTATA LOCALIZADO/LOCALMENTE AVANÇADO NUM CENTRO TERCIÁRIO

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Introdução: O tratamento do Cancro da Próstata, CaP, localizado/localmente avançado tem vindo a evoluir ao longo dos anos. A escolha entre tratamentos baseia-se formalmente no valor de PSA inicial, ISUP e estadiamento clínico.

Objetivos: Este trabalho tem como objetivo analisar a evolução do tratamento de CaP localizado/localmente avançado na instituição, nos períodos de 2019-2024.

Material e métodos: Foram analisados retrospetivamente todos os doentes diagnosticados com CaP localizado/localmente avançado na instituição no período supracitado. Os dados foram colhidos a partir do Processo Clínico Eletrónico e analisados posteriormente com recurso ao programa *SPSS.*

Resultados: De 2019-2024, foram diagnosticados 920 casos de CaP localizado/localmente avançado na instituição. Destes, 77 apresentavam doença de baixo risco, 451 risco intermédio e 270 alto risco, sendo 139 localizado, 91 localmente avançado N0 e 40 N+.

Dos doentes com baixo risco, 59. ficaram em Vigilância Ativa, VA, enquanto que 12 realizaram tratamento curativo focal. Dos restantes, doentes com mais co-morbilidades e faixas etárias mais altas, um realizou Orquidectomia bilateral e quatro ficaram em *watchful waiting*, WW.

Nos CaP de risco intermédio, 37.8% foram submetidos a tratamento cirúrgico, 53.2% a Radioterapia+Hormonoterapia (RT+HT),0.98% a Braquiterapia (BT) e 6% em VA. A percentagem de doentes propostos para tratamento curativo decresceu, sendo 91.5% em 2019 e 86.7% em 2023. Verificou-se também um decréscimo na escolha do tratamento cirúrgico, 50% em 2019 para 23% em 2023, com concomitante aumento na percentagem de doentes propostos para RT+HT, de 35% em 2019 para 59% em 2023

Já nos doentes com doença de alto risco localizada, 105 (75.54%) foram propostos para tratamento curativo, sendo 23.80% (25/105) para tratamento cirúrgico, 75% (79/105) para RT+HT e um doente para crioterapia (0.96%) Ao longo dos anos, a percentagem de doentes selecionados para tratamento curativo evoluiu de 68% em 2019 para 75% em 2023, com pico em 2020 (83%). Dos restantes doentes, sem condições para tratamento ativo, seis doentes realizaram Orquidectomia bilateral, cinco bloqueio hormonal e 9 ficaram em WW.

Por último, nos doentes com doença localmente avançada e N0, verificou-se que 81.44% (79/91) foram propostos para tratamento ativo. Destes, 79.75% (63/79) realizaram RT+HT, 11.4% tratamento cirúrgico, 1.27% (1/79) BT, 1.27% ARTA (abiraterona) em combinação com RT+HT. Nos doentes N+ apenas 10% foram selecionados para tratamento cirúrgico, 40% RT+HT, 12.5% ARTA (enzalutamida ou abiraterona). Nos restantes, devido à idade e performance status, foi decidido tratamento de suporte com bloqueio hormonal, RT paliativa ou WW.

Discussão e conclusão: Com este trabalho verifica-se que existe uma concordância entre as guidelines e as terapêuticas aplicadas na instituição. Para além disso, demonstramos que o tratamento do cancro da próstata mantem-se com intuito curativo na maioria dos casos, incluindo nos localmente avançados.

Os doentes de baixo risco ficam principalmente em vigilância ativa, apesar dos protocolos de vigilância

nem sempre estarem claros e haver alguma disparidade entre instituições. Há ainda alguma tendência para o tratamento ativo nestes doentes, que se observa ao longo dos anos analisados, muitas vezes devido à idade do doente e ansiedade quanto à ausência de tratamento ativo.
Nos doentes com risco intermédio e alto observa-se uma percentagem elevada de doentes submetidos a tratamento ativo, com o foco a desviar-se do tratamento cirúrgico para RT+HT em ambos os grupos, sendo os doentes com idades mais jovens e com melhor performance status selecionados para tratamento cirúrgico.
Já nos doentes com doença de alto risco, por vezes localmente avançada, mantém-se a preferência por escolher tratamento com radioterapia, sendo que nos últimos anos se observa a introdução dos ARTA e outros tratamentos nestes doentes.

CO 35

ESTUDO COMPARATIVO DOS SLINGS URETRAIS TOT VERSUS ALTIS – A EXPERIÊNCIA DE UM CENTRO TERCIÁRIO

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Introdução: Existem diferentes modalidades de tratamento para a incontinência urinária de esforço (IUE), sendo que nos casos refratários à abordagem conservadora, pode ser equacionada intervenção cirúrgica. Dentro das variadas técnicas, os *slings* uretrais têm se destacado como opções eficazes e minimamente invasivas. Existem diversos tipos de slings disponíveis, o *TOT* e o *Altis* representam duas técnicas distintas.
Objetivos: Comparação das duas técnicas cirúrgicas, como outcomes primários complicações pós operatórias e eficácia.
Métodos: Estudo retrospetivo de todas as mulheres submetida a cirurgia IUE no nosso centro hospitalar entre Janeiro de 2018 e Dezembro de 2023.
Resultados: Um total de 464 mulheres foram submetidas a cirurgia IUE, sendo que 14 foram excluídas porque perderam seguimento. Dessas, 175 colocaram *altis* (38.9%), 262 *TOT* isoladamente (58.2%), 7 foram submetidas a *TOT* e colporrafia anterior, 3 *TOT* e sacrocolpopexia, 2 *TOT* e injecção toxina botulinca no mesmo tempo e 1 *TOT* e colporrafia posterior. No grupo de doentes que colocou *Altis* a média de idades e de índice de massa corporal foi de 51.2 ± 11.2 anos e 26.6 ± 8.4 respetivamente, enquanto no que no grupo *TOT* foi 56.7±11.3 anos e 28.3±7.4. No grupo *Altis* 85.7% eram multíparas com uma média de filhos de 1.9±0.9 e no grupo *TOT* 73.1% com uma média de 1.8±1.1. No grupo *Altis* 37.7% apresenta IUE isolada e 62.3% incontinência urinária mista (IUM). No grupo *TOT* 37.8% apresenta IUE isolada, 62.2% IUM. Quanto a métodos de diagnóstico complementares, no grupo *Altis* 76.6% realizou estudo urodinâmico (EUD) com *Valsava leak point pressure* (VLPP) médio de 120.6 ± 45.3. No grupo *TOT* 70.5% realizou EUD com VLPP médio de 111.9 ± 43.6.
Quanto a intercorrências intra-operatórias, ocorreram 4 em doentes no grupo *Altis* (passagem agulha intra-uretral, laceração vaginal e uma tentativa de colocação com trajeto anómalo e laceração da mucosa vaginal, com necessidade de colocação de *TOT* à *posteriori* 1 numa doente durante o ajuste da banda corte porção ancoragem com necessidade de colocação *TOT*) e em 1 doente no grupo *TOT* (laceração vaginal). No pós operatório imediato, no grupo *Altis* 12 doentes tiveram uma infeção trato urinário (ITU), 1 apresentou LUTS obstrutivos com necessidade de algaliação temporária. No grupo *TOT* 6 doentes tiveram ITU e 1 doente submetida a sacrocolpopexia teve choque sético, condicionado por ureterohidronefrose esquerda por estenose iatrogénica do ureter com necessidade de colocação de nefrostomia. Quanto a complicações tardias, no grupo *Altis* 42.3% apresentou complicações (6.3% dor, 5.1% ITU, 18.9% agravamento da IUU, 1.2% LUTS obstrutivos, 4% com extrusão da fita). Adicionalmente 1 doente precisou de revisão cirúrgica, 4 de remover o segmento extruído, com 3 a colocarem *TOT* posteriormente, 4 fizeram secção de fita e 1 por falência teve de colocar *TOT* posteriormente. No grupo *TOT* 19.6% sofreu complicações (2.2% dor, 1.1% ITU, 14.9% agravamento IUU, 1.1% extrusão). Ademais, 1 doente colocou um 2º *TOT* e outra um *TVT*. Foram encontradas diferenças estatisticamente significativas nas complciações tardias e re-intervenção ($p<0.05$).
Quanto à eficácia, 94.3% das doentes no grupo *Altis* ficaram continentes com um tempo de seguimento médio de 14.9 ± 13.1 meses. No grupo *TOT* 93.1% ficou continente com um tempo de seguimento médio de 9.3±10.1 meses. Não foram encontradas diferenças estatisticamente significativas quanto à eficácia ($p>0.05$)
Discussão: Com base nos resultados obtidos, constatamos que tanto o sling *Altis* quanto o *TOT* demonstraram eficácia semelhante no tratamento da IUE. No entanto, diferenças notórias foram encontradas no que concerne tanto as complicações pós operatórias, quer necessidade de re-intervenção subsequente. Portanto, a escolha do tipo de sling deve considerar não apenas a eficácia,

mas também o perfil de segurança, parecendo o TOT ser uma opção mais segura.

CO 36

ARTIFICIAL INTELIGENCE AS A DECISION TOOL FOR PROSTATE CANCER PATIENTS - IS IT SAFE AND USEFULL?

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Introduction & Objectives: Prostate cancer has been a focal point of extensive research endeavors over the past decades, leading to a flood of new concepts and recommendations for its screening, diagnosis, treatment, and follow-up. Patients face a number of choices throughout the diagnostic work-up and treatment plan, and many questions regarding these decisions often remain unanswered, or even unasked. Healthcare providers may struggle to manage patients' expectations and to provide a comprehensive overview of the most recent data on the subject due to a lack of time and resources that meet patient requirements. Artificial intelligence (AI)—the reproduction of human cognition by computers—is already a reality in medicine and has taken a potentially differentiating role in the diagnosis and treatment of prostate cancer. ChatGPT is a large language model developed by OpenAI and widely available to the public. The model uses deep learning techniques to generate natural language, coherent, and grammatically correct text. Despite its growing popularity and performance, there is still limited research on its applicability to clinical practice. Our aim is to determine whether ChatGPT, in its current state, can be a useful and safe decision-making aid for patients with prostate cancer.

Materials & methods: 14 questions frequently posed during consultation and deemed pertinent for individuals with prostate cancer were selected. A publicly available generative conversational artificial intelligence tool (Chat GPT-3.5) was used to pose the selected questions and collect its answers. The primary outcome of the study is the evaluations provided by expert Urologists on the responses generated by ChatGPT, that reviewed and ranked each question on a Likert scale from 1 to 5 for clarity, accuracy, and usefulness. Experts were also asked to identify the number of errors found and provide comments on the answers obtained.

Results

9 field experts from diffenrent centres, in a total of 4 cityes in 3 countries, participated. The mean scores for clarity, accurary and usefullness were 4.3, 4.0 and 4.1, respectivelly. The mean maximum number of errors identified in each answer was 4.4. The comments provided related mostly to the extensiveness of the response generated, and the confusion associated.

Conclusions: From our results, eventhough the answers generated were found to be clear (mena score 4.2) and usefull (mean score 4.1), they scored less favourably in terms of accuracy (mean score 4.0) and several errors (mean 4.4) identified. ChatGPT may be valuable as a working base for discussion between patient and health provider, help guide the conversation and ease patients' doubts, by enhancing the expertise of healthcare professionals rather than take their place. Further research is required to ameliorate its performance. ChatGPT's responses are generated based on training data and may lack updated, state-of-the-art information and disregard personalized patient care. To date, vigilance is still warranted when using such AI tools, and reviewing its content before or with the patient may be the best approach to optimize its benefits.

VÍDEOS

VD 01

PRE PERITONEAL 4-PORT LAPAROSCOPIC RADICAL PROSTATECTOMY IN RENAL TRANSPLANT RECIPIENT

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Renal transplant recipients (RTR) have a higher incidence of cancers than the general population, probably due to the immunosuppressive drugs. Due to the advances in immunosuppressive therapy have increased patient and renal allograft survival times. Urological malignancies are common in RTR, including prostate cancer. In cases of localised prostate cancer, the therapeutic options lie between active surveillance, radical prostatectomy or radiotherapy. In this group of patients, are the local treatments are considered risky, mainly because of the previous pelvic surgery, chronic immunosuppression and the variable position of the allograft.
In this video we present a case of a RTR with prostate cancer proposed to a laparoscopic pre-peritoneal radical prostatectomy.
We demonstrate that laparoscopic radical prostatectomy is a feasible option for renal transplant recipients, but special care must be taken not to avoid any structures.

VD 02

CISTECTOMIA PARCIAL PERIMEÁTICA POR VIA LAPAROSCÓPICA COM DESINSERÇÃO ENDOSCÓPICA DO MEATO URETERAL

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Introdução: O carcinoma urotelial é a segunda neoplasia urológica mais comum nos países desenvolvidos, sendo que o carcinoma do urotélio alto representa apenas 5-10% dos tumores uroteliais, com pico de incidência entre 70 e 79 anos, sendo duas vezes mais comuns em homens. O tratamento padrão preconizado é a nefroureterectomia aberta com excisão do *cuff* vesical, independentemente da localização do tumor. No entanto, a abordagem laparoscópica é considerada segura quando os princípios oncológicos são respeitados. Ainda assim, a via laparoscópica acarreta um risco maior de recidiva.
Objetivo: Apresentamos um vídeo de uma cistectomia parcial perimeática por via laparoscópica com desinserção endoscópica num doente com antecedente de carcinoma do urotélio alto, previamente submetido a nefroureterectomia, com recidiva tumoral no coto do ureter remanescente.
Descrição do Caso: Doente de 61 anos, com história de carcinoma do urotélio alto de alto risco, submetido a nefroureterectomia direita em 2021, com resultado histológico de carcinoma urotelial invasor de alto grau na pelve renal, pT3NxR0. Sem evidência de recidivas até 2023. Após episódio de hematúria em 12/2023, realizou tomografia computadorizada abdomino-pélvica que levantou a possibilidade de recidiva pélvica com extensão para o coto do ureter. Em 01/2024, foi submetido a resseção transuretral da bexiga, onde foi confirmada a presença de uma lesão séssil a aflorar no meato ureteral direito cuja histologia revelou um pTa de alto. Em ressonância magnética de 03/2024, manteve-se a suspeita de lesão no coto do ureter direito. Assim, decidiu-se proceder a cistectomia parcial perimeática por via laparoscópica com desinserção endoscópica do meato ureteral.
Procedimento: O paciente foi posicionado em litotomia para a desinserção endoscópica do ureter direito. Realizou-se uma uretrocistoscopia, identificando uma lesão séssil no meato ureteral direito. Procedeu-se à desinserção endoscópica com ansa de Collins e injeção de azul de metileno nos bordos de resseção para marcação. Sem outras lesões suspeitas identificadas. O paciente foi então reposicionado em Trendelenburg. Colocou-se uma porta de 12 mm supra-umbilical para criar o pneumoperitoneu. Colocaram-se mais três portas de 5 mm (duas na espinha-ilíaca antero-superior bilateralmente e uma no flanco direito) e uma porta de 10 mm no flanco esquerdo. O procedimento começou com a lise e libertação de aderências. Identificou-se uma área azul, compatível com a possível localização do coto do ureter direito. Seguiu-se a suspensão do cólon sigmóide e incisão da prega vesical transversa. Efetuou-se a dissecção e libertação da parede posterior da bexiga até a identificação da vesícula seminal, com necessidade de laqueação do canal deferente direito. A incisão do peritoneu lateral ao ligamento lateral da bexiga foi seguida pela libertação da parede lateral da

bexiga e laqueação do pedículo vesical direito. O coto do ureter direito foi identificado e isolado, com incisão posterior da bexiga na sua proximidade. Constatação da presença de tumor intravesical, compatível com o previamente desinserido. A excisão completa do tumor foi realizada com margem de 1 cm e colocado em saco de órgãos. O defeito vesical foi suturado em duas camadas com fio barbado e a integridade testada. Colocou-se um dreno multitubular na pelve. Finalmente, a peça foi removida e a parede abdominal fechada por planos.
Resultados: O paciente evoluiu favoravelmente no pós-operatório, recebendo alta ao segundo dia após a cirurgia. Foi realizada instilação de mitomicina-C antes da alta. A sonda vesical foi removida no décimo dia pós-operatório. Em consulta de follow-up, o paciente estava clinicamente bem, sem intercorrências. O resultado anatomopatológico revelou a presença de um tumor urotelial pTa de alto grau, margens negativas. A primeira cistoscopia de seguimento, realizada aos três meses, não mostrou evidências de recidiva.
Conclusão: A nefroureterectomia com excisão do *cuff* vesical é essencial para o tratamento de carcinoma urotelial alto de alto risco devido ao risco significativo de recidiva tumoral no coto ureteral e na bexiga. O caso apresentado demonstra a eficácia e segurança da cistectomia parcial perimeática por via laparoscópica com desinserção endoscópica em um paciente com recidiva tumoral no coto do ureter.

VD 03

ROBOTIC BUCCAL URETEROPLASTY USING HUGO-RAS – A CHALLENGING CASE

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Ureteral strictures are a very challenging problem for urologists. In the developed countries, the most common causes include lithiasis and iatrogenic. Since the earlies 2010s', robotic buccal ureteroplasty has been used successfully in mostly complex cases by multiples authors.
In this video, the authors present a challenging case of robotic buccal ureteroplasty using the robotic-assisted system HUGO™.
Clinical case: We present a case of a 44 year-old male with a iatrogenic stricture of the ureter, with a failed first attempt of correction.
We performed the robotic buccal ureteroplasty with use of a peritoneal flap.
We show thaht robotic buccal ureteroplasty is a safe and feasable surgery in complex cases of ureteral stricture. The authors aim to expand their experience in this procedure.

VD 04

AINDA HÁ ESPAÇO PARA CIRUGIA CONVENCIONAL DE LITÍASE? NEFROLITOTOMIA LAPARÓSCOPICA RETROPERITONEAL

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Introdução: Com o avanço recente nos equipamentos e técnicas endourológicas, as cirurgias não endoscópicas para tratamento de litiáse renal estão a tornar-se praticamente obsoletas. No entanto, em situações específicas, as cirurgias convencionais podem ser uma opção eficaz. O objetivo é apresentar um caso de tratamento de um cálculo presente num divertículo calicial adquirido, recorrendo à cirurgia laparoscópica retroperitoneal com auxílio da ecografia intraoperatória.
Caso Clínico: Doente de 34 anos, sexo feminino, referenciada para consulta externa de Urologia em 2023, com história de pielonefrite recorrente nos últimos dois anos. Apresentava como antecedentes duas intervenções endoscópicas para tratamento de litiase ureteral e renal direita realizadas em outro hospital, após um episódio inicial de pielonefrite obstrutiva. Após revisão da história médica, uroculturas realizadas previamente em momentos distintos nos últimos anos, revelaram consistentemente os mesmos agentes microbiológicos, com um padrão de resistência antimicrobiana similar. A TC pré-operatória evidenciava um cálculo de 13 x 15 mm com cerca de 1100 HU em um divertículo calicial anterior situado no polo inferior do rim direito. Tinha sido submetida, no último ano, a uma ureterorrenoscopia flexível retrógrada que não conseguiu identificar o cálculo ou o ostio do divertículo. Face à situação, a doente foi proposto para uma nefrolitotomia laparoscópica. A doente foi inicialmente colocada em posição de litotomia. Realizada pielografia retrógrada que revelou a presença do cálculo radiopaco, mas sem opacificação do interior do divertículo. Após reposicionamento em decúbito lateral esquerdo, procedeu-se à criação do espaço retroperitoneal com balão insuflação e foram colocadas quatro portas de trabalho. Iniciou-se a dissecção e controlo do hilo renal e a posterior dissecção e exposição superfície anterior do polo inferior do rim direito. Com auxílio da ecografia intraoperatória, a posição e os limites cálculo foram marcados e foi

feita uma incisão longitudinal com cerca de 1,5 cm sobre o divertículo. O cálculo foi removido intacto. O óstio do divertículo foi identificado e fulgurado. Procedeu-se para a excisão das paredes do divertículo e posterior renorrafia para fechar o defeito utilizando uma técnica modificada de sliding-clip. Não foram registas complicações intraoperatórias ou pós-operatórias. A cirurgia durou aproximadamente 103 minutos, com 100 mL de perdas hemáticas e o tempo de isquemia quente foi de 14 minutos. A doente teve alta no segundo dia pós-operatório. A análise bioquímica e microbiológica do cálculo revelaram um cálculo 100% apatite, e a cultura identificou dois microrganismos consistentes com culturas anteriores: *Escherichia coli* e *Klebsiella pneumoniae*. A anatomia patológica das paredes excisadas revelou parênquima renal atrófico com nefrite intersticial crônica, parcialmente coberto por urotélio compatível com um divertículo calicial. Realizou TC de reavaliação após 6 semanas revelando a ausência de qualquer fragmento litíasico residual. Sem registos de novas infeções urinárias nos primeiros meses de seguimento.

Discussão/Conclusão: A nefrolitotomia láparoscópica é uma abordagem minimamente invasiva válida e eficaz para o tratamento de casos específicos de litíase renal, especialmente em doentes com alterações anatómicas. Além disso, o uso ecografia intraoperatória permite identificar os limites e posicionamento do cálculo, aumentando a precisão cirúrgica.

VD 05

NEFRECTOMIA PARCIAL ASSISTIDA POR ROBOT DE TUMOR HILAR TOTALMENTE ENDOFÍTICO

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Introdução: A nefrectomia parcial (PN) é o tratamento de eleição para tumores T1 e T2 quando tecnicamente exequível. Comparativamente com a nefrectomia radical (RN), a PN tem mostrado melhoria da sobrevida global, particularmente em doentes jovens e/ou sem comorbilidades aquando a intervenção.

Antes da introdução da cirurgia robótica, a PN aberta (OPN) era a abordagem preferencial em relação à PN laparoscópica (LPN) para tumores mais complexos. Atualmente, a PN assistida por robot (RAPN) tem demostrado superar os desafios da LPN, mantendo as vantagens da cirurgia minimamente invasiva.

Materiais e métodos: Descrevemos o caso de um doente do sexo masculino, de 44 anos, com hábitos tabágicos conhecidos de 25 UMA, encaminhado para o serviço de Urologia por achado incidental de duas lesões renais bilaterais. Apresentava função renal normal – creatinina 0,92, taxa de filtração glomerular 105 mL/dL. A tomografia computorizada (TC) mostrava rim esquerdo com lesão nodular sólida heterogénea parcialmente exofítica com 42mm (cT1b, RENAL score 7) e, ao nível do hilo renal direito, formação nodular sólida heterogénea com 38mm (cT1a RENAL score 10). Atendendo à idade do doente e à natureza síncrona bilateral das lesões, o doente foi proposto para RAPN com o sistema HugoTM RAS, tendo sido submetido em primeiro tempo a intervenção à esquerda, sem intercorrências reportadas. A anatomia patológica revelou carcinoma de células renais de células claras pT1a G2 R0. Seis meses após, foi submetido a RAPN direita.

Resultados: O doente foi posicionado em decúbito lateral esquerdo com semi-flexão do tronco. Procedeu-se à colocação de 6 trocares – um trocar de 11mm para a câmara 5cm abaixo da margem das costelas na linha médio-clavicular, dois trocares de 8mm na linha para-retal, um trocar de 8mm para o 4º braço 2cm acima da linha médio-clavicular, um trocar de 12mm para o assistente abaixo do trocar da câmara e um trocar adicional de 5mm cranial para retração do fígado.

Procedeu-se a mobilização medial do cólon ascendente com identificação do polo inferior do rim esquerdo, músculo psoas e ureter. Procedeu-se a disseção do hilo renal, identificação e referenciação da artéria e veia renais. Procedeu-se à incisão da fáscia de Gerota ao nível do hilo renal (de acordo com localização de lesão em TC). Após identificação do tumor e delimitação da interface entre parênquima normal e tumor com auxílio de sonda de ecógrafo intraoperatória, efetuou-se a clampagem da artéria e veia renais com bulldogs. Procedeu-se a incisão da cápsula e parênquima renal até identificação de pseudocápsula tumoral. Realizou-se enucleorresseção do tumor sem aparente violação das margens. Efetuou-se sutura do leito tumoral com V-Loc 3/0 e da cápsula com V-Loc 2/0. Após de desclampagem dos vasos renais, não foi evidenciada hemorragia residual e foi encerrada a fáscia de Gerota. O procedimento decorreu sem intercorrências. O tempo de isquemia foi de 37 minutos. Os tempos total de cirurgia e de consola foram de 161 e 127 minutos.

Durante o período pós operatório, o doente evolui com febre persistente e elevação marcada dos parâmetros inflamatórios (proteína C reativa 319,33mg/L) que motivou a realização de TC no 5º dia de pós-operatório, tendo este mostrado hipodensidade cortical no terço superior com

morfologia vagamente triangular, bem como densificação dos planos adiposos adjacentes e pequena quantidade de líquido peri-renal parcialmente loculado com discreto realce periférico junto à segunda porção do duodeno e no espaço hepato-renal, a sugerir sobreinfeção. O doente iniciou antibioterapia profilática com melhoria clínica e analítica, tendo tido alta ao 9º dia de pós-operatório.

Conclusão: A RAPN é um procedimento exequível e seguro para o tratamento de lesões tumorais hilares completamente endofíticas. O recurso à ecografia intraoperatória pode ajudar na identificação, bem como delimitação dos limites do tumor, potenciando a preservação de parênquima renal normal.

VD 06

ROBOTIC TRANSPOSITION AND URETEROURETEROSTOMY OF TYPE 1 RETROCAVAL URETER

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Introduction: Retrocaval ureter, also known as circumcaval ureter, is a very uncommon congenital condition in which the ureter travels behind the inferior vena cava (IVC), resulting in blockage and hydronephrosis. Type 1 retrocaval ureter is distinguished by a high-looping ureter that encircles the IVC, resulting in substantial blockage. Surgical intervention is necessary to alleviate the blockage and preserve renal function. The development of robotic surgery provides a minimally invasive technique with increased precision. This video describes the robotic transposition and ureteroureterostomy procedure for correcting a Type 1 retrocaval ureter.

Objectives: To describe the feasibility, safety and efficacy of robotic-assisted surgery in the transposition and ureteroureterostomy for correcting a Type 1 retrocaval ureter while also giving a step-by-step guidance to the surgical technique.

Methods and materials: Both the patient's clinical record and surgery video recordings were used to make this video. Retrocava ureter significant literature was also reviewed.

Results: The robotic transposition and ureterou-reterostomy were completed successfully without intraoperative complications. The total operative time was 70 minutes, within acceptable limits, and blood loss was minimal (less than 25ml). The postoperative course was uneventful and the patient discharged on the second postoperative day.

Discussion/Conclusion: This case highlights the significant advantages of robotic-assisted surgery in complex urological reconstructions, particularly for rare conditions like retrocaval ureters. The procedure demonstrated enhanced precision, superior three-dimensional visualization and improved dexterity, leading to a successful outcome with minimal operative time and blood loss. The rapid and uncomplicated postoperative recovery underscores the safety and efficacy of this approach. Robotic surgery not only reduces perioperative morbidity, but also enhances recovery, making it a preferred option for challenging reconstructions. As robotic technology evolves, its role in urology is expected to expand, potentially setting new standards in surgical care.

VD 07

DIVERTICULECTOMIA LAPAROSCÓPICA - HIDRONEFROSE BILATERAL PROVOCADA POR DIVERTÍCULOS DA BEXIGA

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Os divertículos da bexiga resultam de um defeito nas fibras musculares do detrusor. Na esmagadora maioria dos casos a presença de divertículos é assintomática e tipicamente descoberta de forma incidental. Divertículos de maior dimensões podem provocar sintomas inespecíficos (sintomas de armazenamento ou esvaziamento) ou de efeito de massa.

Este vídeo apresenta um caso de diverticulectomia laparoscópica de um homem de 49 anos com sintomas de esvaziamento (jato fraco, sensação de esvaziamento incompleto), lombalgia e hidronefro-se bilateral provocado por dois divertículos. O doente realizou uma tomografia computadorizada que demonstrava hidronefrose bilateral, ectasia completa do ureter direito e dois volumosos divertículos compressivos.

Analiticamente apresentava um agravamento da função renal com um aumento da creatinina (~2 mg/dL). Com o objetivo de alívio sintomático e de preservação e melhoria da função renal, foi decidido realizar uma diverticulectomia laparoscó-pica.

No bloco operatório foi efetuada uma cistoscopia rígida que identificou múltiplos divertículos, os dois divertículos compressivos, de maior volume,

encontravam-se localizados na parede lateral direita e posterior. O doente de seguida foi posicionado a 30º em posição de Trendelenburg, com colocação de quatro trocares. O divertículo direito foi dissecado inicialmente, sem grande dificuldad, tendo sido facilmente excisado com posterior encerramento com V-Loc. A identificação e dissecção do segundo divertículo, foi dificultada devido ao seu grande volume e à presença do colo na parede posterior. Apesar da complexidade, o encerramento do orifício do divertículo da parede posterior foi conseguido sem complicações, tendo também sido encerrado com V-Loc. As peças operatórias foram extraídas utilizando um saco e colocado um dreno.
Durante o pós-operatório, o paciente desenvolveu uma infeção do trato urinário, tendo realizado um ciclo de antibioterapia com resolução do quadro. O doente teve alta no oitavo dia com hemoglobina estável, função renal normalizada e resolução da hidronefrose em ecografia.
Em resumo, esta diverticulectomia laparoscópica conseguiu uma melhoria da função renal, assim como uma melhoria de qualidade de vida do doente.

VD 08

URETEROCISTOPLASTIA DE AUMENTO: PREPARAÇÃO PRÉ-TRANSPLANTE RENAL

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Introdução: As válvulas da uretra posterior (VUP) são a causa mais comum de obstrução do trato urinário e doença renal crónica resultante de uropatia obstrutiva na população pediátrica.
A obstrução causada pelas VUP pode levar à hipertrofia do detrusor, com diminuição da complacência da bexiga e refluxo vesicoureteral, hidronefrose e doença renal crónica.
A cistoplastia de aumento é um procedimento cirúrgico realizado com o objetivo de aumentar a complacência e capacidade vesical, de forma a preservar o trato urinário superior. A fonte mais frequente de aumento da bexiga é o intestino delgado. No entanto, o uso do segmento intestinal está associado a altas taxas de complicações. Num grupo selecionado de doentes com megaureteres e rins não funcionantes, o aumento da bexiga pode ser feito usando os ureteres e, assim, omitindo as complicações associadas com os aumentos gastrointestinais.
Caso Clínico: Doente do sexo masculino, de 27 anos, com antecedentes de doença renal crónica terminal por uropatia congénita (VUP com displasia renal bilateral). Submetido a confeção de vesicostomia aos 15 dias de idade. Aos 3 anos, submetido a encerramento de vesicostomia e incisão endoscópica das válvulas da uretra posterior.
Em 2015, por oclusão intestinal por bridas, foi submetido lise de bridas por via laparoscópica.
Os exames complementares de diagnóstico evidenciaram exclusão funcional do rim esquerdo com redução marcada da espessura parenquimatosa do rim direito, hidronefrose bilateral, bexiga com capacidade diminuída e refluxo vesicoureteral grau IV passivo bilateral. Iniciou programa de substituição renal com hemodiálise em janeiro de 2024, com avaliação para eventual transplante renal de dador vivo.
Foi decidido ser submetido a nefrectomia bilateral laparoscópica e ureterocistoplastia de aumento previamente ao transplante renal.
Após nefrectomia bilateral laparoscópica, foi feita uma incisão mediana infraumbilical. A bexiga foi dissecada, com libertação de aderências à aponevrose. Foi feita disseção distal dos ureteres bilateralmente, preservando a sua vascularização. Foi feita uma secção vesical transversa, ao nível da cúpula, em *smile* invertido, até aos meatos ureterais.
Os dois ureteres foram seccionados longitudinalmente desde o anel de Weldeyer com sua posterior secção anterior e prolongamento até à incisão vesical previamente realizada. Foi feito *roofing* dos ureteres espatulados com sutura ureter-bexiga com Vicryl 2/0 e posterior encerramento de cistoplastia através de sutura ureter-ureter.
Foi introduzida sonda vesical e confirmada a estanquicidade com instilação de 250 mL de soro fisiológico.
A cirurgia decorreu sem intercorrências, com uma duração de 3h30 e perdas estimadas de 300mL.
O internamento teve uma duração de 15 dias. O doente cumpriu treinos vesicais durante o internamento e realizou cistografia ao 10º dia pós-operatório, sem evidência de fuga.
Atualmente, cumpre, no domicílio, treinos vesicais com instilações de 200mL com frequência de três vezes por dia.
Mantém-se a aguardar transplante renal de dador vivo.
Discussão/Conclusão: Os principais benefícios do aumento da bexiga com tecido ureteral incluem a ausência de produção de muco, bem como a prevenção de distúrbios metabólicos e complicações gastrointestinais. Embora seja um procedimento cirúrgico complexo, a nefrectomia bilateral combinada com a ureterocistoplastia é

viável e pode ser realizada com segurança. No entanto, recomenda-se um acompanhamento multidisciplinar rigoroso para estes doentes. Resultados a longo prazo, especialmente após o transplante renal, são necessários para tirar conclusões mais definitivas.

VD 09

LAPAROSCOPIC TRANSPERITONEAL URETEROLITHOTOMY FOR A LARGE URETERAL STONE

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Introduction: Ureterolithiasis, particularly large ureteral stones, is a prevalent condition with potential for severe complications, including obstruction, infection, and kidney damage. When treatments like extracorporeal shock wave lithotripsy or minimally invasive approaches like ureteroscopy fail or are not feasible, laparoscopic or open approaches are required. Laparoscopic ureterolithotomy has gained prominence as a minimally invasive technique for removing large stones, offering significant advantages in terms of recovery time and morbidity compared to open surgery. In this video-assisted case report, we highlight the surgical technique used to treat a 30 mm ureteral stone causing left-sided uretero-hydronephrosis.
Objectives: The primary goal is to demonstrate the clinical and surgical outcomes of laparoscopic ureterolithotomy for large ureteral stones, with a focus on operative efficiency, patient recovery, and perioperative outcomes. Additionally, we aim to illustrate the use of surgical video documentation for educational purposes, showcasing key procedural steps.
Material and methods: We collected clinical data retrospectively from the patient's medical records, including complementary diagnostic exams such as CT scans, renal ultrasound, and renal scintigraphy. The surgical procedure was recorded, and the video was edited using Capcut software to include descriptions of each surgical step. Clinical data, including operative time, estimated blood loss, postoperative recovery, and complications, were recorded. Clinical data collected included operative time, estimated blood loss, hospital stay, and postoperative complications.
Results: The patient is a 57-year-old male with a history of vesicoureteral reflux, who was referred to Urology for management of left-sided uretero-hydronephrosis caused by a large ureteral stone. Imaging (CT scan) confirmed the diagnosis, and the renal scintigraphy showed normal differential renal function by both kidneys. A five-port laparoscopic approach was utilized. The ureter was dissected, and the larger stone (30 mm) was successfully extracted, as well as a smaller stone of 10 mm. The edited video captured key moments of the surgery, from the initial dissection to stone removal. The surgery was completed in 125 minutes with minimal blood loss (<100 mL). The patient had an uneventful recovery and was discharged on postoperative day 2. No perioperative complications occurred. He underwent removal of the double-J ureteral catheter one month postoperatively. A postoperative CT scan showed significant reduction of the uretero-hydronephrosis and confirmed complete stone clearance. The patient's renal function remained stable.
Discussion: Laparoscopic ureterolithotomy proved to be a highly effective treatment for a large ureteral stone, with favorable outcomes in terms of blood loss, operative time, and hospital stay. This case also underscores the potential of using video documentation for enhancing surgical education. Editing the surgery with Capcut allowed for a clear visualization of the critical steps, aiding both teaching and quality assessment. The absence of complications further supports laparoscopic ureterolithotomy as a safe and minimally invasive option for managing complex ureteral stones. Future efforts should include larger, prospective studies to assess long-term outcomes and reinforce the role of laparoscopic techniques in modern urologic surgery.

VD 10

NEFRECTOMIA PARCIAL - A IMPORTÂNCIA DA ECOGRAFIA INTRA-OPERATÓRIA

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Introdução: A cirurgia poupadora de nefrónios é, sempre que possível e seguro, a abordagem mais desejável no tratamento dos tumores renais. A ecografia intra-operatória é uma mais-valia na identificação tumoral e planeamento cirúrgico, de forma a obter melhores resultados funcionais e oncológicos.
Objetivos: Demonstrar a utilização de ecografia intra-operatória na identificação e apoio à enucleação de uma lesão suspeita endofítica.
Material e métodos: Doente do sexo masculino, 62 anos e com antecedente de nefrectomia radical esquerda por tumor em 2012. Com uma TFGe 57ml/min/1.73m^2, é identificada uma lesão suspeita

em TC, única e parcialmente exofítica, no rim único (direito). O doente é referenciado para avaliação e tratamento, tendo a revisão das imagens de TC colocado a hipótese de uma segunda lesão, endofítica. A RMN identificou a presença de duas lesões suspeitas: uma posterior, parcialmente exofítica, com 31mm e outra anterior, endofítica, com 12mm. O doente foi proposto para tumorectomia renal robótica com ecografia intra-operatória.
Resultados: O vídeo elaborado demonstra os passos-chave da cirurgia:
1: Realização intra-operatória de ecografia renal para identificação e marcação da lesão endofítica anterior;
2: Enucleação da mesma sob clampagem arterial, com hemostase com pinça bipolar e aplicação de Surgicel®;
3: Alteração da localização da câmara (do braço 3 para o braço 2) e restantes instrumentos, substituindo a ótica de 0º pela de 30º, de forma a facilitar o acesso ao retroperitoneu e a luxação anterior do rim;
4: Isolamento da lesão posterior, com enucleação da mesma sob nova clampagem arterial e hemostase com renorrafia com PDS® e aplicação de Surgicel®;
5: Reposição do rim na sua posição anatómica.
Discussão/Conclusões: A ecografia intra-operatória é uma mais-valia na cirurgia poupadora de nefrónios, sendo de especial interesse nas lesões endofíticas com indicação cirúrgica.

VD 11

ROBOTIC-ASSISTED REVISION OF A FEMALE URINARY ARTIFICIAL SPHINCTER

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Introduction: A robotic-assisted revision of a female artificial urinary sphincter was performed at the Urology Department of Centro Hospitalar Universitário de São João in Porto. Robotic-assisted surgery has emerged as a valuable approach for managing complex urological reconstructive procedures, offering enhanced precision, better visualization, and reduced morbidity compared to traditional open and laparoscopic techniques. These advantages are particularly beneficial in challenging cases, such as placement or revisions of artificial urinary sphincters.
The patient is a 69-year-old female with a history of multiple surgeries for stress urinary incontinence (SUI), first underwent a tension-free vaginal tape (TVT) procedure in 2017, followed by a Burch colposuspension in 2019, and a robotic-assisted artificial urinary sphincter implantation in 2021, all performed in Monaco. In January 2024, she presented with sudden onset of complete urinary incontinence. Diagnostic evaluation, including cystoscopy, revealed an open urethra with no coaptation after pump activation, but no evidence of urethral erosion. A renal and bladder ultrasound showed no significant abnormalities.
Objective: The objective of this study is to describe the technical approach and clinical outcomes of a robotic-assisted revision of a female artificial urinary sphincter, emphasizing the benefits of robotic surgery in complex revision procedures.
Methods: The procedure was performed using DaVinci robotic surgical system, placing three 8mm ports and one 12mm left lateral port. The patient's prior suprapubic incision was utilized for the passage of the sphincter components. The urethral cuff and reservoir were carefully dissected and removed. Examination of the reservoir revealed it was empty, which likely is the cause of the failure of the sphincter system. Following measurement of the urethra, a new cuff was placed, and the tubing was connected to a new pump positioned in the vaginal labia. The system was debubbled, and the peritoneum was closed with a running Stratafix suture. The patient was discharged the next day and the bladder catheter was removed 3 days after the surgery.
Results: The patient regained urinary continence immediately following activation of the sphincter four weeks after the surgery. No intraoperative or postoperative complications were observed. At six months follow-up, the patient remained continent and had returned to an active lifestyle.
Conclusion: Robotic-assisted surgery proved to be a highly effective and safe option for the revision of a female artificial urinary sphincter. The enhanced dexterity, precision, and visualization allowed for meticulous dissection and accurate placement of the new sphincter components. In this case, the robotic approach facilitated a successful revision with excellent functional outcomes and minimal morbidity. Given these advantages, robotic-assisted revision should be considered a valuable option for managing complex urological cases, such as artificial urinary sphincter revisions, particularly in patients with prior surgeries and challenging anatomy.

VD 12

ROBOTIC COMPLETE EXCISION OF SACROCOLPOPEXY MESH

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Introduction: Managing complications from synthetic mesh implantation present significant challenges. This video illustrates a complex case of sacrocolpopexy mesh removal using robotic-assisted surgery, highlighting the evolving capacities of robotic surgery in addressing intricate mesh-related complications. By sharing this case study, we aim to provide insights for surgeons facing similar scenarios in pelvic floor reconstruction.

Design: We present a 61-year-old non-smoking, active female, with a BMI of 21.3 and 2 previous pregnancies and vaginal deliveries. She has a past history of an open prolapse surgery in 1998, followed by a robotic-assisted sacrocolpopexy with mesh in 2019 and a TVT in 2021 for SUI. Following TVT, her SUI improved. However, in January 2023 she sought consultation for increased urinary frequency and recurrent UTIs. Cystoscopy revealed bladder trigone deposits, suggesting mesh erosion. Pelvic MRI disclosed collections around the mesh with heterogenous content. After thorough discussion, comprehensive robotic-assisted mesh removal warranted.

Results: Bilateral double J ureteral stents were placed endoscopically at the begining of the procedure. Opening the bladder facilitated thorough mesh removal. The surgery took approximately 3h30min with no post-operative complications. The patient was discharged after 2 days, removing the bladder catheter on day 7. Stents were removed a month post-surgery. Despite resolution of LUTS, discomfort and recurrence of the prolapse led to a transvaginal correction in March of 2024. Since then, she has remained symptom-free, content, and active.

Conclusion: This case highlights the critical role of advanced robotic surgical techniques in the management of complex mesh-related complications. The meticulous approach shown aligns with the evolving consensus advocating comprehensive mesh excision. Evidence supports minimally invasive procedures, improving outcomes and reduced morbidity. Documenting such cases contribute to the growing body of knowledge in pelvic floor surgery, aiming for enhanced functional outcomes and refined practices in the management of mesh-related complications.

VD 13

LAPAROSCOPIC RIGHT HEMINEPHRECTOMY IN A HORSESHOE KIDNEY

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Introduction: Horseshoe kidney is a congenital anomaly characterized by a fusion of the renal poles affecting approximately 1 in 400 individuals. Tumors within horseshoe kidneys occur at a similar rate to normal kidneys. Nevertheless, this anomaly presents unique surgical challenges due to its abnormal anatomy and vascular supply. Careful surgical planning and detailed CT image analysis are essential for surgical success.

We intend to demonstrate a successful laparoscopic heminephrectomy for a large renal mass in a horseshoe kidney.

Methods: We present the case of a 70-year-old patient with a previous history of hypertension, HIV, stage III chronic kidney disease (glomerular filtration rate (GFR) 37,5 ml/min/1,73 m^2) and cured vocal cord neoplasia. The patient was referred to the Urology outpatient consultation due to an incidental CT scan finding of a 71*62*64mm mass in the right hemikidney of a horseshoe kidney. He was offered a laparoscopic right heminephrectomy.

Results: Patient was positioned in left lateral decubitus with semi-flexion of the trunk. Four trocars were placed: two 10mm trocars (para-median right at the umbilical level and right iliac crest) and two 5mm trocars (right flank and sub-costal).

The ascending colon was mobilized medially by opening the Toldt line to gain access to the kidney. Careful dissection followed, identifying the ureter, lower pole, and isthmus region. Right inferior polar artery and vein were identified and ligated. Identification and ligation of two right renal artery and vein. After liberating the upper pole and ligating the ureter, the renal isthmus was divided using an Echelon 60 mm stapler (Ethicon). Post-dissection, meticulous hemostasis was ensured, and the excised kidney mass was removed through an extended incision the 10mm trocar site to the right iliac fossa. The patient was monitored inpatient for five days post-surgery, focusing on kidney function optimization, and was discharged with a GFR of 25 ml/min/1,73 m^2 without any surgical complications. Pathologic analysis of the specimen revealed a clear cell renal cell carcinoma pT1bR0. The patient has now completed one year follow up without recurrence and stable kidney function (GFR of 23 ml/min/1,73 m^2).

Conclusion: This case highlights the feasibility and safety of laparoscopic heminephrectomy in patients with horseshoe kidney tumors, underscoring the potential of laparoscopic surgery to effectively manage complex renal surgeries.

VD 14

ROBOTIC RIGHT ADRENALECTOMY FOR PHEOCHROMOCYTOMA RECURRENCE

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Introduction: Pheochromocytomas and paragangliomas are rare tumors that arise from the chromaffin cells of the adrenal medulla or sympathetic paravertebral ganglia, respectively. Neurofibromatosis type 1 (NF-1) is one of the syndromes traditionally associated with pheochromocytoma. At least 10% of pheochromocytomas (PHEOs) and paragangliomas (PGLs) may recur after the initial surgery and in NF-1 patients about 10% of pheochromocytomas are bilateral. The presence of a malignant pheochromocytoma is primarily indicated by local tissue invasion or distant metastases. Often, the malignancy is only classified as such after recurrence, sometimes years after the initial complete resection. We intend to demonstrate a successful robotic excision of right pheochromocytoma recurrence.
Methods: We present the case of an 80-year-old patient with a previous history of coronary disease, osteoporosis and cured thyroid cancer. The patient was followed in the Urology outpatient consultation due to a pheochromocytoma in the context of NF-1 mutation and had already been submitted to left laparoscopic adrenalectomy in 2022. The follow up CT scan demonstrated a nodular hypervascular solid 16 mm lesion located in the right adrenal gland. MIBG scintigraphy showed elevated tracer uptake on the referred mass. Furthermore, urinary catecholamines were elevated backing up the hypothesis of pheochromocytoma.
Results: DaVinci X robotic system was used. Patient was positioned in left lateral decubitus with semi-flexion of the trunk. Five robotic trocars were placed. There were significant adhesions to the inferior hepatic border which were carefully dissected. The ascending colon was mobilized, and the parietal peritoneum incised above the anterior face of the kidney. The right adrenal was identified. Careful dissection followed along the lateral side of the vena cava; the upper pole of the kidney was dissected of the adrenal. Adrenal artery and vein were identified and ligated using Hem-o-locks. The remaining faces of the lesion were carefully dissected, and the mass was removed using an endobag. The patient was monitored inpatient for three days post-surgery without any surgical complications. Pathologic analysis of the specimen revealed a pheochromocytoma pT3 R0. Post-operative urinary catecholamines were within normal range.
Conclusion: This case illustrates the effectiveness of robotic surgery in managing complex adrenalectomy cases.

VD 15

THE ROLE OF THE UROLOGIST IN DEEP ENDOMETRIOSIS - LAPAROSCOPIC NEPHROURETERECTOMY & HEMI-CYSTECTOMY

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Introduction: Endometriosis is a chronic benign disease affecting up to 10% of premenopausal women. Its presentation can range from a superficial, mostly asymptomatic form to deep infiltrating endometriosis (DIE). DIE involves the urinary tract in about 20-53% of the cases, most commonly affecting the bladder.
Objectives: we aim to present a severe case of DIE with extensive bladder infiltration and chronic right ureteral obstruction, managed through a minimally invasive approach.
Materials & methods: Data was retrieved from retrospective review of the patient's clinical records.
Results: We report a case of a 32 year-old nulliparous female with menarche at 11 years-old. She presented with dysmenorrhea, dyspareunia, and dysuria. Initial ultrasound revealed an infiltrative bladder lesion with right distal ureteral compression and ureterohydronephrosis, leading to complete renal parenchyma atrophy. Magnetic resonance imaging confirmed these findings and also revealed a complete left pyeloureteral duplication. Cystoscopy showed a bulky nodule invading the trigone and right ureteric orifice. Biopsies were compatible with endometriosis. The patient underwent a laparoscopic right nephroureterectomy and excision of the vesical endometriosis nodule. Due to significant invasion of the posterolateral bladder wall, a nearly complete hemi-cystectomy was performed, with care to spare both the contralateral ureteral orifices. To prevent a postoperative inflammatory compression of the left ureteral orifices, double-J stents were placed. Operative time was 240 min, blood loss was 200mL,

and the patient was discharged on postoperative day 3. The bladder catheter was removed after one month, and the double-J stents after two months. At 15 months of follow-up, she is in the 37th week of gestation with no reported obstetric complications.

Discussion/conclusions: While DIE is traditionally considered a gynecological condition, its systemic inflammatory nature and multi-organ involvement necessitate a multidisciplinary approach for optimal care. Despite being benign, surgical management of DIE can involve complex urological complications, such as ureteral and bladder involvement, which may lead to loss of kidney function. Urologists must be well-versed in female pelvic anatomy, minimally invasive surgical techniques, and play an active role in the interdisciplinary management of DIE to achieve optimal outcomes with low complication rates.

VD 16

DISTAL LEFT URETER LESION AFTER LAPAROSCOPIC AND OPEN SURGERIES - STILL A PLACE FOR ROBOTICS?

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Introduction: Distal Ureteral iatrogenic injuries, though relatively rare, present a challenging complication arising from various ginecological, urological and general surgeries procedures. Effectively managing such injuries requires a thorough understanding of the available surgical approaches and their associated risks. Several strategies exist for correcting distal ureteral injuries. These include ureteroureterostomy, ureteroneocystostomy with or without psoas-hitch or Boari flap, transureteroureterostomy, and kidney autotransplantation, between others. Each approach can be performed immediately or deferred, using open, laparoscopic, or robotic-assisted techniques. Robotic-assisted procedures offer precision and enhanced visualization, which can be particularly advantageous in complex cases. However, performing robotic surgery after previous operations can present additional challenges, including altered anatomy, scar tissue, and an increased risk of further complications.

Objectives: To present a clinical case of a 38-year-old female patient that underwent a laparoscopic anterior resection of the rectum and endometriosis foci complicated with distal left iatrogenic ureteral injury managed with left nefrostomy. Post-op complicated by partial rectal anastomotic dehiscence, necessitating open surgery with anastomosis disassembly and a left-sided terminal colostomy. To discuss the various surgical approaches to correct the distal ureteral injury and the challenges faced by the urologist. Additionally, to describe the feasibility, safety, and efficacy of robotic-assisted ureteroneocystostomy with psoas-hitch.

Methods and Materials: This video was created using both the patient's clinical records and surgery video recordings. Additionally, relevant literature on surgical techniques for correcting ureteral injuries was reviewed.

Results: The robotic-assisted ureteroneocystostomy with psoas-hitch was successfully completed without intraoperative complications, despite the procedure's difficulty due to extensive peritoneal adhesions. The total operative time was 210 minutes, with minimal blood loss of less than 50 ml. The postoperative course was uneventful, and the patient was discharged on the fifth postoperative day with a bladder catheter.

Discussion/Conclusion: This case underscores the complexity involved in managing a distal iatrogenic ureteral injuries. The decision to employ robotic-assisted ureteroneocystostomy with psoas-hitch was influenced by the need to preserve the left-sided terminal colostomy and to avoid compromising conditions for future intestinal reconstruction. Given the challenges of the situation, a second open approach to address the ureteral injury could have severely jeopardized the potential for future intestinal reconstruction. Ureteral and bowel reconstruction during same approach could be too risky, in addition to being extremely difficult too. A robotic-assisted approach aimed to minimize additional trauma and preserve abdominal integrity, which is crucial for any subsequent reconstructive procedures. The success of this procedure, despite the challenging operative conditions, underscores that robotics might still has a space in the managment of complications of previos open and laparoscopic procedures, given its benefits in enhancing surgical precision and visualization.

On the other hand, although the outcome was very positive in this case, the benefits and risks should always be weighed before making any surgical decision. A precise, individualized, multidisciplinary decision is essential in such complex cases.

In conclusion, the robotic-assisted approach in this case not only provided a successful outcome but also highlights the potential of robotic techniques in addressing complex ureteral injuries, even after previous complicated open surgeries. This

experience supports the continued individualized use of robotic-assisted surgery in the management of challenging ureteral injuries, provided that the specific anatomical and procedural complexities are carefully considered.

VD 17

RETROPERITONEAL LYMPHADENECTOMY WITH RESECTION OF THE WALL OF THE CAVA AND LIVER METASTASECTOMY

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Introdution: Testicular cancer is the most common solid malignancy in men aged 15 to 45 years. Testicular cancer typically has excellent cure rates. However, patients with chemo-refractory tumors that progress despite chemotherapy face a poor prognosis. Retroperitoneal lymph node dissection (RPLND) is used both in the primary treatment, staging of testicular cancer, as well as in salvage procedures when residual masses remain after chemotherapy. For selected patients in this last group, salvage RPLND is an option to treat residual masses greater than 1 cm. Post-chemotherapy RPLND is significantly more complex than primary resections due to secondary fibrosis around major abdominal vessels caused by chemotherapy. The laparoscopic approach to RPLND was first introduced in 1992 as a staging procedure and nowadays is considered a safe oncological option for the salvage treatment. Multiple studies have confirmed its safety and efficacy. However, salvage RPLND is associated with higher complication rates, among these are lymphoceles, chylous ascites, retrograde ejaculation, small bowel obstruction, postoperative ileus, blood vessel injury, ureteral lesion, and pancreatic injury.
Objectives: This video aims to show a laparoscopic retroperitoneal lymphadenectomy with resection of the anterior wall of the vena cava and liver metastasectomy.
Materials and methods: The images of the surgery were edited to create this video.
Results: The authors present the case of a 33-year-old male who initially presented with pain in the right iliac fossa, leading to the detection of a testicular tumor. Preoperative laboratory tests revealed elevated levels of lactate dehydrogenase (275 U/L) and alpha-fetoprotein (3158 ng/mL). A CT scan identified a 7 cm retroperitoneal mass compressing the inferior vena cava, along with liver and lung metastases. The patient underwent a right orchiectomy, which revealed a seminoma, corresponding to stage IIIB. He was subsequently treated with four cycles of bleomycin, etoposide, and cisplatin (BEP), completed two months after the orchiectomy. Three months later, a rise in alpha-fetoprotein levels was observed, and a CT scan showed new metastases in the right lung, liver, and a large inter-aortocaval lymphadenopathy measuring 31 x 25 mm. The patient then received four cycles of paclitaxel, ifosfamide, and cisplatin (TIP), with a partial response. Consequently, he underwent the retroperitoneal lymphadenectomy. During the procedure, access to the retroperitoneum was achieved, and the vena cava, aorta, both renal veins, and ureters were exposed. Lymphadenectomy was performed, targeting the precaval, preaortic, inter-aortocaval, lateroaortic, and laterocaval lymph nodes. While dissecting the right gonadal vein, an intraluminal lesion extending into the inferior vena cava was discovered. The lesion was excised, and several sutures were required on the vena cava due to its fragile wall. A section of the vena cava infiltrated by the lesion was also resected, and the cavorrhaphy was completed using 4/0 Prolene. After the lymphadenectomy, the patient was repositioned for the general surgery team to perform the hepatic metastasectomy. The surgery lasted 7 hours. The patient was discharged on postoperative day 19 due to persistent serous drainage. Histopathological analysis revealed two retroperitoneal lymph nodes showing a complete response to therapy and near-complete response in the right gonadal vein insertion and metastatic liver disease.
Discussion/Conclusions: Retroperitoneal lymph node dissection continues to play a vital role in the treatment of testicular cancer patients. Laparoscopic excision of residual retroperitoneal masses following chemotherapy is a viable and effective option for salvage therapy. Nevertheless, it is a highly complex procedure associated with significant risks. Due to its complexity this technique should only be performed in by surgeons with extensive experience in laparoscopy.

VD 18

ROBOTIC ASSISTED URETERAL REIMPLANTATION USING HUGO-RAS

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Ectopic ureter which is one of the causes of urinary incontinence in adults is a rarely seen entity. Normal

urination together with continuous incontinence are patognomic features for infrasphincteric ureteral openings.
In this video, the authors present a challenging case of robotic ureteral reimplantation using the robotic-assisted system HUGO ™.
Clinical case: We present a case of a 21-year-old patient suffering from incontinence beginning from his childhood whose diagnosis could not be made by means of many diagnostic tools, and assessments including computed-tomography (CT), and ultrasound (US). However, MR urography established the diagnosis: an ectopic ureter with vaginal insertion associated with ureteral duplication.
We performed the robotic ureteral reimplantation with the use of Lich—Gregoir anastomosis.
We showed that robotic ureteral reimplantation is a safe and feasible surgery. The authors aim to expand their experience in this procedure.

VD 19

HOLMIUM LASER ENUCLEATION OF THE PROSTATE (HOLEP) – DETAILEDCDESCRIPTION OF THE SURGICAL TECHNIQUE

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Introduction: Holmium Laser Enucleation of the Prostate (HoLEP) has emerged as a highly effective and minimally invasive surgical technique for the treatment of benign prostatic hyperplasia (BPH), particularly in cases involving large prostate volumes. This technique has demonstrated superior outcomes in terms of symptom relief, minimal perioperative complications, and long-term durability when compared to traditional methods such as transurethral resection of the prostate (TURP). Despite its proven efficacy, HoLEP requires advanced surgical skills, making it a procedure best performed in specialized centers.
Objectives: To provide a detailed description of the HoLEP surgical technique, as implemented at a tertiary care center, highlighting the procedural steps, as well as the materials and technology used.
Case presentation: This video describes a 69-year-old male with a medical history of BPH and atrial fibrillation, under daily medication with tamsulosin, finasteride, and edoxaban, presented with recurrent episodes of urinary retention. His International Prostate Symptom Score (IPSS) was 22, indicating severe lower urinary tract symptoms. Digital rectal examination revealed no suspicious findings, and his prostate-specific antigen (PSA) level was 4.2 ng/mL. A transrectal ultrasound revealed a prostatic volume of 108 grams. Uroflowmetry findings were consistent with an obstructive pattern. Given the persistence of symptoms and urinary retention despite medical therapy, he was proposed for surgical treatment with Holmium Laser. This approach was selected due to its efficacy in managing large prostates and its safety profile in anticoagulated patients.
Description of the Surgical Technique: At the beginning, patient is placed in the lithotomy position. Initial cystoscopy is performed to survey the bladder and define the prostate's anatomic configuration, including the verumontanum and ureteral orifices. A hockey stick (J-shaped) incision is made laterally to the verumontanum to identify the adenoma plane on both lobes. Bilateral bladder neck incisions are made at 5 and 7 o'clock positions, extending to the surgical capsule and following the line under the ureteric orifices to the verumontanum. The procedure is again mirrored on the contralateral side. Fibers connecting the median lobe to the capsule are divided, and the lobe is disconnected at the bladder neck and placed in the bladder for later morcellation. The bladder neck is incised at the 12 o'clock position to release the upper aspects of both lobes, and the incision is extended laterally and distally to the level of the verumontanum, continuing upwards to define the apex. The lower margin of the lobe is released from the apex to the 2 o'clock position, and the apical urethral mucosa is cut to reduce sphincter muscle tension. The entire lobe is enucleated and placed in the bladder for morcellation, with the procedure repeated on the contralateral side. Postoperatively, the prostatic fossa is inspected for hemostasis and vestigial fragments are removed. For morcellation, the inner sheath is replaced with a long nephroscope and adapter, and the bladder set is passed down the instrument channel. After full bladder distension, suction is activated to grasp fragments, and morcellation is performed with care to maintain tissue contact and avoid mucosal injury.
Postoperative period: The surgery was completed without complications. The procedure was completed safely in 80 minutes, including 54 minutes for enucleation and 16 minutes for morcellation. The patient had a length of stay of 2 nights, with bladder catheterization maintained for 1 day. No complications were observed during the postoperative period. After 1 month, the IPSS had improved to 5, with only mild irritative symptoms reported. Histopathological analysis revealed 84

grams (78% reduction from the initial volume) of benign prostatic tissue.

Conclusions: HoLEP proved to be an effective and safe surgical intervention for managing BPH in patients with large prostate volumes. Moreover, this technique is particularly advantageous for patients on anticoagulant therapy due to its reduced risk of bleeding complications. Despite its benefits, HoLEP has a relatively steep learning curve, which underscores the importance of performing the procedure in specialized centers. Mastery of the various surgical steps is crucial for optimizing the technique's efficacy and achieving the best clinical outcomes.

VD 20

TRANSRECTAL ULTRASOUND-GUIDED TRANSPERINEAL PROSTATE BIOPSIES UNDER LOCAL ANESTHESIA

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Introduction: Prostate biopsies are a cornerstone in the diagnosis and management of prostate cancer. They are essential for confirming the presence of cancer, determining its grade, and guiding treatment decisions. Traditionally, transrectal prostate biopsies have been the standard approach. However, advances in technique have introduced transperineal biopsies as a viable alternative. This approach offers potential advantages, including a lower risk of infectious complications and improved detection rates of clinically significant prostate cancer. Importantly, transperineal prostate biopsies can be performed under either general or local anesthesia, providing flexibility in patient management and comfort. Understanding the nuances of this biopsy technique is crucial for optimizing patient outcomes and ensuring accurate diagnosis.

Objectives: To provide a detailed description of the ultrasound-guided transperineal prostate biopsy under local anesthesia, as implemented at a tertiary care center, highlighting the procedural steps, as well as the materials and technology used.

Material and methods: This video provides a detailed description of the various steps involved in performing a ultrasound-guided transperineal prostate biopsy under local anesthesia. The procedure requires several essential materials to ensure accuracy and safety. Local anesthetics, such as lidocaine or bupivacaine, are used to administer a perineal block. A series of needles is needed: 25G and 22G needles for the initial administration of anesthesia, a 17G introducer co-axial needle for access, and a 22G spinal needle for additional anesthetic delivery. For the biopsy itself, a 16-cm 18G biopsy needle with a 2 cm tray is utilized. An ultrasound machine equipped with a biplane transrectal probe, which includes both axial and sagittal transducers, is essential for real-time imaging and guidance. Additionally, sterile drapes and gloves are necessary to maintain a sterile field and minimize the risk of infection.

Description of the Surgical Technique: The patient is positioned in the lithotomy position, with the scrotum taped back and the perineal area disinfected. Local anesthesia is administered to the perineal skin approximately 1 cm anterior and lateral to the anterior anal margin, initially using a 25G needle followed by a 22G needle. A 17G introducer co-axial needle is then inserted at both sites. A transrectal ultrasound probe is introduced and rotated to visualize the lateral part of the prostate gland. A 22G spinal needle is inserted through the co-axial needle to inject local anesthetic into the levator ani muscle complex and the peri-apical triangle, while carefully avoiding the urethra, penile bulb, and small perineal vessels. This procedure is repeated on the opposite side. Biopsies are then performed using a 16-cm 18G biopsy needle with a 2 cm tray, inserted through the co-axial needle. The angle of the introducer needle may be adjusted during the procedure. Biopsy cores are taken in a craniocaudal orientation from apex to base, differing from the transrectal biopsy method. Additionally, targeted biopsies are conducted for PIRADS 4 and 5 lesions. After the procedure, patients are moved to the recovery room where they are provided with food and encouraged to drink plenty of fluids. Before discharge, it is essential that patients achieve spontaneous voiding. They are informed that perineal pain may occur and advised to take paracetamol as needed for relief. Additionally, any questions or concerns from the patients are addressed to ensure they are fully informed and comfortable with their post-procedural care.

Conclusions: Mastery of the transperineal prostate biopsy technique is crucial given its status as the preferred method for prostate cancer diagnosis according to current scientific evidence. This approach offers significant advantages over traditional methods, including reduced risk of infectious complications and enhanced diagnostic accuracy. Proficiency in this technique ensures reliable detection and management of prostate

cancer, ultimately contributing to improved patient outcomes. As the field continues to evolve, maintaining expertise in transperineal biopsy will be essential for optimizing diagnostic precision and advancing clinical practice in urology.

VD 21

CORREÇÃO DE FÍSTULA VESICO-VAGINAL: CIRURGIA ROBÓTICA

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A fístula vesico-vaginal é uma comunicação anómala entre a bexiga e a vagina, que resulta em incontinência urinária contínua. As principais causas incluem complicações cirúrgicas (especialmente após histerectomia), trauma obstétrico e radioterapia pélvica. O diagnóstico é feito através de exames de imagem, como uma uretrocisto-grafia, cistoscopia ou TC/RMN. O tratamento é predominantemente cirúrgico, podendo ser realizado por via vaginal ou abdominal.

Neste caso, apresentamos uma doente de 51 anos que foi submetida a uma histerectomia em 2021, no contexto de endometriose, e que recorreu à consulta com queixas de incontinência urinária total. No final de 2022, foi submetida a uma correção da fístula por via vaginal, mas os sintomas recorrentes reapareceram após alguns meses. A doente realizou uma TC pélvica que revelou a existência de um trajeto fistuloso da parede posterior da bexiga até à parede superior da vagina. A cistoscopia evidenciou um trajeto fistuloso na parede posterior da bexiga, localizado a cerca de 1 centímetro da prega intertrigonal. Foi proposta a correção da fístula por via abdominal por cirurgia robótica.

O procedimento iniciou-se com uma cistoscopia, durante a qual a fístula foi cateterizada com um fio-guia, seguida de algaliação. Posteriormente, foram colocadas cinco portas abdominais. Procedeu-se à disseção do espaço vesico-vaginal até à fístula, que foi identificada pelo fio-guia. A bexiga foi dissecada ao longo da fístula, a aproximadamente 1 centímetro de distância do bordo da fístula. A vagina foi encerrada com sutura V-Loc e a bexiga em duas camadas, a primeira com Vicryl e a segunda também com V-Loc. Por fim, foi colocado Tachosil entre a bexiga e a vagina para controlo hemostático.

Este caso demonstra como a cirurgia robótica pode ser uma opção eficaz no tratamento de fístulas vesico-vaginais, particularmente em casos mais complexos ou recorrentes. A tecnologia robótica oferece maior precisão e controlo durante o procedimento, o que pode resultar em melhores resultados clínicos e uma menor probabilidade de recidiva.

CT 01

ENHANCING BLADDER CANCER MANAGEMENT: VALUE OF COMPLETE TURBT BEFORE CHEMOTHERAPY

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Introduction: Transurethral resection of bladder tumor (TURBT) is a key procedure for diagnosing and initiating bladder cancer treatment. The advantages of complete TURBT (cTURBT) are well-established for both non-muscle invasive bladder cancer (NMIBC) and muscle-invasive bladder cancer (MIBC), in this case, when bladder-sparing strategies are employed. However, the benefits of cTURBT before neoadjuvant chemotherapy (NAC) in MIBC remain uncertain. Recent studies have raised questions about whether the completeness of TURBT influences NAC outcomes, resulting in mixed findings. This study aims to evaluate the impact of cTURBT before NAC and radical cystectomy (RC) on the pathological and survival outcomes in MIBC patients.
Objectives: To assess the impact of cTURBT on pathologic response. Secondary endpoints involved survival and oncologic outcomes.
Material and methods: Tertiary centre data from patients with MIBC submitted to NAC and radical cystectomy between March 2010 and November 2022 was retrospectively analysed. Patients with complete resection (cTURBT) before NAC were compared to those with incomplete (iTURBT).
Results: Thirty-seven patients were included in this study. NAC regime was identical between groups. cTURBT group demonstrated a higher rate of downstaging than the iTURBT group (50% vs 20%, p = 0.022). During the mean 49-month follow-up period, overall survival (86.4% vs. 40%, p=0.005), relapse-free survival (81.8% vs. 46.7% p=0.036), and cancer-specific survival (90.9% vs 60%, p=0.042) were higher in the cTURBT group. Furthermore, we observed significantly fewer relapses, higher survival rates, and lower oncological-related deaths in patients who exhibited downstaging.
Conclusion: cTURBT demonstrated a favourable impact on patients with MIBC undergoing NAC, enhancing pathologic downstaging and improving survival outcomes. Our results can be confounded by cTURBT being a proxy for less aggressive disease.

CT 02

REPARAÇÃO EX-VIVO E AUTO-TRANSPLANTE RENAL COMO TRATAMENTO DE ANEURISMA DA ARTÉRIA RENAL

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Introdução: O aneurisma da artéria renal é uma patologia rara, mas potencialmente fatal se complicada de rotura. A maioria dos doentes não apresenta qualquer sintoma, embora 90% sofra de hipertensão arterial, uma vez que frequentemente está associado algum grau de estenose da artéria renal. O tratamento cirúrgico é recomendado, em doentes assintomáticos, para diâmetros superiores a 2-3 cm, devido ao risco de rotura associado a altas taxas de mortalidade. Outros critérios para intervenção, independentemente do tamanho, são rotura, aparecimento de sintomas ou hipertensão refratária com estenose funcionalmente importante da artéria renal.
Objetivo: Apresentação de um caso de aneurisma da artéria renal tratado com nefrectomia laparoscópica, reparação *ex-vivo* e auto-transplante.
Material e métodos: Reportamos o caso de uma doente de 57 anos, sexo feminino, com antecedentes de hipertensão arterial de difícil controlo (sob medicação anti-hipertensora tripla com Enalapril, Atenolol e Amlodipina), dislipidemia e hipotiroidismo. Durante o estudo de uma dor lombar à direita, foi realizada uma TC com contraste, que revelou um aneurisma sacular da artéria renal direita, de 20mm de maior diâmetro, localizado junto ao hilo renal. A função renal era normal e a doente não apresentava nenhuma outra causa para a dor lombar.
Resultados: A doente foi submetida a nefrectomia laparoscópica, com libertação completa de todas as aderências do rim direito antes da laqueação do pedículo renal, com o objetivo de diminuir ao mínimo possível o tempo de isquemia. O rim foi excisado através de uma incisão na fossa ilíaca direita, imerso em gelo triturado e perfundido com solução Celsior®. O aneurisma era sacular e envolvia as artérias segmentares média e inferior, pelo que foi realizada a rafia do aneurisma, seguida

da reimplantação da artéria segmentar superior para facilitar a anastomose arterial. O rim foi reimplantado na artéria e veia ilíacas externas, através da incisão previamente realizada para extração do rim. Uma angiografia intraoperatória, realizada por punção femoral direita retrógrada, excluiu defeitos no preenchimento arterial pós-anastomose. O tempo total de cirurgia foi de 6h45min, o tempo de isquemia fria de 1h24min e o tempo de isquemia quente de 38 minutos (9 minutos durante a nefrectomia e 29 minutos durante o auto-transplante).

O pós-operatório não teve intercorrências e a doente teve alta ao 6º dia pós-operatório. 1 ano depois, mantinha a função renal inalterada, a hipertensão arterial encontrava-se controlada apenas com Enalapril e o Eco-Doppler renal revelou patência da artéria renal e perfusão renal normais.

Discussão/Conclusões: A maioria dos aneurismas da artéria renal são descobertos incidentalmente. A história de hipertensão é frequente e, na maioria dos pacientes, melhora após a reparação do aneurisma. Diversas técnicas estão disponíveis para a reparação destes aneurismas. Contudo, no presente caso, a reparação *ex-vivo* do aneurisma renal permitiu melhor acesso e tempos de reconstrução mais longos, tendo em conta a localização distal do aneurisma e o envolvimento de diversos ramos da artéria renal. Apesar da baixa mortalidade no tratamento cirúrgico eletivo de AAR, a morbilidade perioperatória da abordagem convencional é significativa. Este caso realça a vantagem de combinar técnicas minimamente invasivas, como a nefrectomia laparoscópica, com a reparação *ex-vivo* do aneurisma, o que nos parece permitir um aumento da probabilidade de eficácia do procedimento, com menores riscos associados.

CT 03

SCHISTOSSOMÍASE URINÁRIA – CASO CLÍNICO

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Introdução: Cerca de 200 milhões de pessoas estão infetadas por espécies de Schistosoma. A infecção por *Schistosoma haematobium* é endémica nas regiões de África e Península Arábica, e afeta principalmente o aparelho génito-urinário. A principal resposta imunopatológica desencadeada pela *S. haematobium* é a deposição de ovos no sistema urinário, que leva ao desenvolvimento de granulomas e eventual fibrose tecidular. Sintomas como hematúria assintomática recorrente, disúria e polaquiúria são frequentes em infeções agudas. A schistossomíase urogenital crónica pode originar ureterohidronefrose e/ou refluxovesicoureteral com consequência da fibrose de estruturas do aparelho urinário. O desenvolvimento de insuficiência renal resultante poderá ser reversível com tratamento antihelminta. Os pacientes com infeção crónica têm risco aumentado de sobreinfeção bacteriana, bem como risco de desenvolvimento de carcinoma vesical, particularmente, carcinoma espinocelular.

Caso clínico: Mulher de 44 anos de idade, originária de Angola, referenciada à consulta de Urologia no contexto de achado incidental em AngioTAC "área de parênquima renal esquerda ligeiramente hipodensa e hipovascular, com cerca de 3,8 cm de diâmetro transverso e 2,2 cm antero-posterior sobretudo perceptível nas imagens tardias - fase excretora. (…) hipótese de lesão neoformativa infiltrativa com origem urotelial". Sem antecedentes pessoais de relevo. Nega hábitos tabágicos ou exposição ocupacional a toxinas. Sem LUTS, hematúria ou infeções do trato urinário de repetição. Refere apenas lombalgia esquerda esporádica. Exame objetivo sem alterações. A doente realizou uretrocistoscopia "uretra livre, bexiga sem lesões suspeitas. Meatos ortotópicos a ejacular urina límpida" e colheu citologia, que se revelou negativa para carcinoma urotelial de alto grau. Neste contexto, efetuou UroTAC que evidenciou "calcificação de toda a bexiga e focalmente no urotélio alto esquerdo; sem defeitos de preenchimento ao longo do trato urinário". Realizou estudo serológico para HIV, Hepatite A, Sífilis, Hepatite B, todos negativos. Concomitantemente, em avaliação de Ginecologia, por clínica de cataménios abundantes, realizou uma ecografia transvaginal que revelou vários miomas uterinos, tendo sido proposta para histerectomia abdominal. A anatomia patológica de histerectomia demonstrou "colo uterino com lesões de cervicite crónica, cistos mucosos e numerosas estruturas calcificadas com características de ovos de *schistossoma heamatobium*". Pela elevada probabilidade de schistossomíase urinária, a doente iniciou terapêutica com Praziquantel. Verificou-se uma evolução favorável, mantendo-se assintomática. O UroTAC de reavaliação demonstrou ausência de alterações suspeitas em todo o aparelho urinário, assim como resolução de calcificações vesicais.

Discussão/Conclusão: A identificação de ovos de S. *haematobium* na urina, fezes ou em biópsias vesicais ou retais é o *gold standard* para o diagnóstico de schistossomíase. Neste caso clínico, a existência de ovos de schistossoma na peça

cirúrgica de histerectomia foi diagnóstica de infeção. A identificação e tratamento precoce de schistossomíase urinária tem uma elevada importância, uma vez que a infeção crónica, por vezes assintomática, promove alterações que levam ao risco de desenvolvimento insuficiência renal e neoplasia urotelial. O tratamento médico com antihelminta é eficaz, com resolução de calcificações, hidronefrose e recuperação da normal função renal. Contudo, em casos crónicos severos poderá ser necessário tratamento cirúrgico com reparação ou derivação do trato urinário, ou mesmo cirurgia radical, em casos de carcinoma urotelial invasor.

CT 04

RENAL ARTERY PSEUDOANEURYSM - A RARE LIFE-THREATENING EVENT AFTER NEPHROSTOMY TUBE PLACEMENT

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Renal artery pseudoaneurysms (RAPs) are rare vascular abnormalities that can arise from trauma, iatrogenic injury, following procedures such as percutaneous renal biopsy, endoscopic stone surgery, percutaneous nephrolithotomy, nephrostomy tube insertion, partial nephrectomy, kidney transplantation or endovascular interventions. Unlike true aneurysms, which involve all layers of the arterial wall, pseudoaneurysms are formed by a breach with blood contained by surrounding tissues or the adventitia. Clinically, they present with hematuria, flank pain and, on occasion, hemorrhagic shock. We aim to highlight this complication and to encourage the pursuit of this diagnosis for refractory post-interventional anemia.

We present the case of a 29-year-old Angolan male with a history of chronic renal failure of mixed etiology - hypertension and untreated pyelo-ureteral junction syndrome (PUJS) of the right kidney -, a single functioning left kidney, and hepatitis B. He presented with fever, headache, nausea, and vomiting and was diagnosed with type A influenza infection and worsening of baseline renal function.

On examination, he was hypertensive and tachycardic. A CT scan revealed an enlarged right renal pelvis with no obvious obstructive cause, other than the known PUJS. He was admitted for treatment and started on hemodialysis. Due to persistent fever, he was given empirical antibiotic therapy and a percutaneous nephrostomy tube was placed in the right kidney.

The next day, he complained of intense flank pain, hematuria, and acute anemia. An angioCT revealed blood in the collecting system and a perirenal hematoma with active arterial bleeding. He was hemodynamically stable, and conservative treatment was initiated.

For persistent hematuria and further refractory anemia, requiring several blood transfusions, a follow-up angioCT as ordered and showed focal active bleeding. An angiography was performed, diagnosing a RAP wich was selectively embolized. Another small focal point of arterial bleeding was identified, but there was no safe endovascular approach.

Over the next few days, there was a continued need for transfusional support along with recurrence of fever. Considering the failure of angioembolization for this hypofunctioning kidney, he underwent an open nephrectomy. Intraoperatively, the perirenal hematoma was drained and a completely shattered kidney excised, due to the compression of the hematoma.

At 6 months post-op, there are no complications, and the patient is awaiting a kidney transplant.

RAPs, although rare, can evolve with serious complications and life threatening events, being prone to sudden and profuse hemorrhagic rupture, with a mortality rate of up to 80%. The diagnosis may be difficult and requires a high level of suspicion. Imaging modalities, such as angioCT or arteriography, can be used to confirm diagnosis, providing detailed visualization of the vascular anatomy and the RAP itself.

Management depends on the size, location, and clinical stability of the patient and range from conservative observation to interventional radiology techniques like angioembolization, with a success rate of 90%. Surgery is reserved for hemodinamicaly unstable patients, or failed/unavailable endovascular treatment and nephrectomy should reamain the last resort.

In this case, despite initial conservative and interventional approaches, including selective angioembolization, the patient required a nephrectomy due to persistent bleeding and progressive kidney damage. We believe the lesion might have occurred from guide-wire related renal injury, since the RAP was right opposite to the nephrostomy tube puncture site. The RAP was missed on initial angioCT, wich contributed to delayed focal treatment.

This case underscores the complexity of diagnosis and managing RAPs, and highlights the need for a multidisciplinary approach to ensure optimal

care.Timely and effective intervention is key in preventing unfavorable outcomes and long-term morbidity.

CT 05

ACCURACY AND USABILITY TESTING OF MEDSAM IN SEGMENTATION OF THE URETER IN LAPAROSCOPIC SURGERY

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Introduction: Medical image segmentation plays a crucial role in developing machine learning models for enhancing surgical precision, particularly in challenging anatomical regions such as the retroperitoneum. Identifying the ureter during laparoscopy is a critical yet challenging task due to its retroperitoneal location and proximity to other structures, increasing the risk of accidental injury, which may lead to severe complications such as urinary leaks or fistulas. Medical Segment Anything Model (MedSAM) is an advanced artificial intelligence algorithm designed and trained to segment medical images. The performance of MedSAM in laparoscopic anatomy has not been adequately tested in retroperitoneal organs, given only 1.7% of its training data was general laparoscopic images, which may limit its reliability in such cases.
Objectives: This study aimed to evaluate the performance of MedSAM in ureter segmentation during laparoscopy by comparing the segmentation done by a trainee with expert annotations from the Dresden Surgical Anatomy Dataset (DSAD), to assess the feasibility of using MedSAM for assisting less experienced clinicians.
Materials and methods: DSAD contains expert semantic segmentation for laparoscopic views where masks were created to segment intra-abdominal organs and the results were reviewed by expert surgeons in minimally invasive surgery. The data used to train MedSAM did not include the DSAD. In the present submission, an urology trainee using MedSAM and following the annotation instructions for DSAD created masks for ureter images using bounding box annotation. These segmentation masks were compared using the Dice Similarity Coefficient (DSC), which is a statistical metric used to evaluate the accuracy of segmentation by measuring the overlap between the predicted and expert-annotated masks. A higher DSC indicates a closer match between the two, with a maximum value of 1 representing perfect agreement. A 95% confidence interval for the mean DSC was calculated using bootstrapping, a resampling method that estimates the precision of sample statistics.
Results: The total 1275 annotated frames from 32 different patients were analyzed. Semantic segmentation using MedSAM achieved a mean DSC of 0.696 (95% confidence interval 68.6 - 70.6) with a standard deviation of 19.5. A histogram with the distribution of the DSC values is annexed. The average annotation time per image was 25 seconds.
Discussion/Conclusion: A trainee using MedSAM achieved a mean DSC of 0.696, indicating a 70% overlap in ureter segmentation compared to expert annotations. This performance is lower than the results observed for intraperitoneal organs. Despite the lower average overlap, the distribution shows a notable concentration of values between 0.7 and 0.9, suggesting that most segmentations exhibit a high degree of similarity or overlap. The average annotation time per image was 25 seconds, potentially offering significant time savings over manual expert segmentation. Further efforts should focus on enhancing the segmentation accuracy of retroperitoneal structures by refining model training or incorporating additional laparoscopic datasets, specifically targeting retroperitoneal structures. Improving this accuracy is critical for the development of reliable intraoperative AI tools.

CT 06

PAIN PERSPECTIVES: COMPARING PATIENT TOLERABILITY IN TRANSPERINEAL VS. TRANSRECTAL PROSTATE BIOPSIES

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Introduction: Prostatic biopsy remains the cornerstone for diagnosing prostatic cancer. While transrectal ultrasound guided biopsy has been the standard approach, current guidelines have shifted towards the transperineal approach as the preferred first-line method. The transperineal approach is associated with a lower risk of procedure-related infections, which is particularly critical in the context of rising global antibiotic resistance. However, this method is technically more complex and often perceived as more painful. As a result, some institutions opt to perform transperineal biopsies under general anesthesia
Objective: To evaluate and compare the tolerability and incidence of complications associated with the transperineal approach to

prostate biopsy versus the traditional transrectal approach.

Patients and methods: This retrospective cohort study included men who underwent prostate biopsy via either the transrectal or transperineal approach, using only local anesthesia, at a tertiary care center between October 2023 and May 2024. Patient demographics, clinical outcomes, and pain scores (rated on a scale of 0-10) were analyzed.

Results: A total of 100 patients were included in the analysis, with a mean age of 70 years (range: 49-86 years). The mean pain scores were 3.86 for the transrectal approach and 4.83 for the transperineal approach, with no statistically significant difference between the two (p=0.113). Among patients who underwent the transperineal approach, 51.1% reported a pain score of 5 or lower, and 87.8% indicated they would be willing to undergo the procedure again if necessary. There were no significant differences in the incidence of complications between the both approaches.

Conclusion: The transperineal approach can be considered a viable and safe alternative to the transrectal approach, with comparable tolerability and patient acceptance. Further research with larger sample sizes and long-term follow-up is warranted to confirm these findings and explore strategies to further optimize pain management during transperineal biopsies.

CT 07

AI-ENHANCED CYSTOSCOPY: A REVIEW OF EMERGING TECHNOLOGIES AND CLINICAL APPLICATIONS

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Background: Bladder cancer (BCa) is a prevalent tumor, with its incidence rising worldwide. Effective detection and monitoring of BCa is mostly based on the cystoscopic visualization of bladder lesions. Advanced cystoscopy methods, such as narrow band imaging (NBI) and fluorescent cystoscopy (FC), have improved our capacity to distinguish BCa from surrounding normal tissue. However, the accuracy of these techniques largely depends on the experience and expertise of the physician performing the procedure.

Artificial intelligence (AI) is being increasingly integrated into medical practice, with its ability to automatically detect features that are imperceptible to the human eye. AI has the potential to play a pivotal role in computer-aided diagnosis (CAD) and subsequent treatment. AI techniques, such as machine learning (ML) and deep learning (DL), are trained on large datasets of endoscopic images to develop CAD tools that enhance the accuracy and efficiency of cancer diagnosis by doctors. ML allows systems to learn from data without being explicitly programmed for each task. Within ML, DL utilizes artificial neural networks (ANNs) that mimic the connectivity of neuronal networks in the human brain. Convolutional Neural Networks (CNNs), a type of ANN, excel in image recognition by leveraging local image features, offering robust, scalable solutions for image-based medical diagnosis.

In the context of cystoscopy, AI-assisted techniques, though not extensively evaluated, hold significant potential. These techniques are designed to analyze cystoscopic images and videos, aiding in the identification of abnormalities within the bladder mucosa, such as tumors and suspicious lesions. By detecting patterns indicative of cancer, AI can facilitate more accurate and efficient diagnoses.

Objective: This work aims to provide a concise overview of the complexities involved in AI-assisted cystoscopy and the current status of AI algorithms developed to enhance detection rates in this endoscopic examination.

Material e methods: Non-systematic review of the literature with selection of scientific articles published in the past five years, by searching Pubmed, Nature reviews Urology and The Journal of Urology using the combination of the term "cystoscopy" with one of the following: "artificial intelligence", "deep learning" and "convolution neural network". The sample identified 91 articles from the databases. Of these, 23 abstracts were reviewed, and 12 articles were analyzed in depth to conduct the thematic review. The analysis was performed qualitatively to address the objectives of the study.

Results: The authors applied ML and DL models to analyze images collected from cystoscopy, enabling the automated recognition of bladder tumors. Analysis models using ANNs, particularly CNN algorithms, have been developed and trained with large image datasets. These models have demonstrated robustness in analyzing new datasets, enhancing their potential application in performing cystoscopies.

Ongoing clinical trials and research studies are focused on validating the effectiveness of AI in cystoscopy. In the reviewed studies, DL algorithms developed to detect BCa using white light image have shown impressive performance, with high sensitivity (89.7%-98%) and specificity (93.7%-

97.5%). Additionally, there have been encouraging results in improving the detection of challenging lesions, such as flat lesions or carcinoma in situ, and in distinguishing tumors from inflammatory changes. Algorithms for detecting BCa with NBI are also under development, but have exhibited lower sensitivity (78.1%-83.7%). One study evaluated the diagnostic performance of AI in tumor grading using the red/green/blue method, showing significant promise for future advancements.

Conclusion: This work provides a comprehensive review of the current state of AI-based algorithms aimed at improving BCa detection. While these algorithms are still under development or in the early stages of implementation, they have shown considerable potential. The integration of AI into cystoscopy is expected to enhance the performance of urologists in diagnosing, performing tumor resections, monitoring and ultimately, improving patient outcomes. As AI continues to evolve, its use in endoscopic examination is anticipated to become increasingly prevalent in clinical practice.

CT 08

URC DIAGNÓSTICAS: A EXPERIÊNCIA DE UM ANO NUMA ULS

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Introdução: O carcinoma do urotélio alto era, até há relativamente pouco tempo, tratado com nefroureterectomia radical. Dados recentes apoiam técnicas poupadoras de nefrónios, incluindo a resseção ureteroscópica das lesões. As indicações formais para o tratamento endoscópico conservador (URC) incluem doentes com rim único, lesões renais bilaterais ou compromisso da função renal. Com os avanços dos equipamentos endourológicos, a indicação para tratamento ureteroscópico estendeu-se à generalidade dos doentes. O sucesso da técnica passa pela decisão partilhada com o doente, dado o risco de recorrência e necessidade de vigilância e, possivelmente, reintervenção. O objetivo da técnica passa pelo diagnóstico macroscópico da lesão, obtenção de material para análise histopatológica e, em última análise, ablação completa da lesão.

Objetivos: Estabelecer uma comparação entre a abordagem diagnóstica existente na literatura e a verificada em estudos de caso, assim como os seus resultados.

Material e métodos: Reuniram-se artigos científicos existentes nas plataformas online disponíveis, com revisão da literatura, apoiada nas recomendações das *Guidelines* da Associação Europeia de Urologia. Procedeu-se ao levantamento dos casos clínicos de URC diagnósticas, por suspeita de tumor do urotélio alto, ao longo de um ano na ULS. Recorreu-se às plataformas de uso clínico desta unidade hospitalar, assim como aos arquivos da Anatomia Patológica, tendo sido identificados 16 doentes.

Resultados: Selecionaram-se 5 artigos científicos para revisão da literatura. Na totalidade dos 16 casos selecionados, procedeu-se a URC diagnóstica por aparecimento de lesões suspeitas em exames de imagem, localizadas aos cálices renais/bacinete e ureter pélvico em 75% dos casos. Cerca de 80% dos doentes eram homens, com idades entre os 45 e os 90 anos. Foi colhida citologia no intra-operatório em 14 dos 16 doentes, sendo negativa em 75% dos casos com anatomia inconclusiva na mesma percentagem. Em apenas 2 casos se procedeu posteriormente a nefroureterectomia, sendo que, em 1 destes 2 doentes o resultado histológico da biópsia apoiou o procedimento. O tempo decorrido desde o diagnóstico até à nefroureterectomia oscilou entre 1 a 6 meses, sem progressão de doença nesse período.

Discussão/Conclusões: A ureterorrenoscopia diagnóstica permite inspeção do ureter e sistema coletor, para mapeamento tumoral previamente à decisão de terapêutica conservadora. Além disso, permite realização de biópsia, apesar de se verificar undergrading quando comparada com peças de nefroureterectomia, tornando mandatório seguimento apertado do doente que decide pelo tratamento conservador, com repetição da URC. A combinação do resultado anatomopatológico configurado pela biópsia, achados imagiológicos e citologia urinária determina a decisão entre nefroureterectomia radical e abordagem conservadora. Nos casos apresentados, é possível concluir que a maioria das suspeitas em imagem não se configuraram em alterações macroscópicas à inspeção endoscópica, evitando-se, assim, uma intervenção cirúrgica major e suas eventuais complicações. Por outro lado, nos casos em que se confirmaram as lesões, não houve progressão de doença. Assim, conclui-se acerca do benefício da realização de URC diagnóstica previamente à decisão no sentido da cirurgia convencional. Revela-se, no entanto, fundamental o levantamento de casos e estudo dos mesmos, de

forma a que se possam desenvolver diretrizes diagnósticas e terapêuticas.

CT 09

CISTECTOMIA RADICAL – FOTOGRAFIA DE 10 ANOS DE EXPERIÊNCIA DE UM HOSPITAL DISTRITAL

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Introdução: O cancro da bexiga é a segunda neoplasia urológica mais comum, com o carcinoma urotelial (CU) a representar cerca de 90% dos casos. Aproximadamente 25% dos casos de CU são diagnosticados como músculo-invasivos à apresentação. A cistectomia radical (CR) com linfadenectomia pélvica é o tratamento *gold-standard* para estes casos, associando-se a significativa morbilidade e mortalidade, com taxas que variam entre 30% e 60%.
Objetivos: Avaliar a casuística global de doentes submetidos a CR por carcinoma da bexiga, incluindo características demográficas, descrição de resultados intra-operatórios, complicações e mortalidade pós-operatória.
Material e métodos: Foi realizada uma análise retrospectiva dos doentes submetidos a cistectomia radical entre janeiro de 2014 e março de 2024, num hospital distrital. Das 236 cistectomias realizadas, excluíram-se 32 (4 por doença oncológica de base ser de origem gastrointestinal e 28 por doença benigna). As características patológicas dos tumores foram descritas conforme a classificação TNM de 2017. As complicações foram avaliadas aos 30 e aos 90 dias utilizando a escala de Clavien-Dindo (CV).
Resultados: Foram analisados dados de 204 doentes, com idade média de 72 anos. 81% era do sexo masculino e 52,4% apresentava um índice de comorbilidade de Charlson ≥ 6. Mais de metade eram fumadores ativos ou ex-fumadores. A indicação mais comum para a cirurgia foi CU em estádio clínico T2 (75%), seguindo-se a indicação paliativa/salvação em 9,8%. A indicação de T1 de alto grau correspondeu a 8,8% e o CU BCG-refractário a 3,9%. Em 31% dos casos, a cirurgia foi realizada por via laparoscópica. A derivação urinária mais frequente foi a uretero-ileostomia cutânea (72%), seguida pela ureterostomia cutânea (22%). Entre as neobexigas (5%), a de Studer foi a mais comum (3,4%). A linfadenectomia foi realizada em 80% dos pacientes, sendo o *template standard* o mais utilizado (57%). O tempo médio do procedimento foi de 288 minutos. A maioria não teve complicações intraoperatórias (88%), quando ocorreram foram principalmente lesões vasculares (5%) e lesões do reto (2,9%). Metade dos pacientes precisou de transfusão de concentrado eritrocitário. O tempo médio de internamento foi de 17,6 dias. A maioria apresentava doença extravesical ≥pT3 (58,4%) e 24% tinham doença ganglionar. As margens cirúrgicas foram negativas em 78% dos casos. As complicações pós-operatórias a 90 dias ocorreram em 56% dos pacientes, com 28,9% de CV grau I/II e 27,5% de grau III-V. As complicações precoces mais frequentes foram ileus (26%), infecção do trato urinário alto (18,6%), deiscência da anastomose intestinal (4,4%), complicações da ferida operatória (20,6%), evisceração (12,3%), e 19,6% necessitaram de re-intervenção. A infecção respiratória foi a mais frequente entre as restantes (6,4%). A taxa de mortalidade no pós-operatório foi de 6,8%. 27% dos pacientes tiveram pielonefrite aguda até aos 90 dias. A taxa de re-internamento a 90 dias foi de 25,5%. 16% apresentaram aperto da anastomose. 20% dos doentes receberam quimioterapia neoadjuvante, dos quais 40% alcançaram resposta patológica completa.
Discussão/Conclusões
A análise confirma a complexidade da CR e o desafio do pós-operatório frequentemente complicado. Os dados estão alinhados com a literatura, embora algumas complicações tenham ocorrido com maior frequência do que o descrito, como deiscência da anastomose (4,4% vs. 1,4%), complicações da ferida operatória (20,6% vs. 11%) e evisceração (12,3 vs 9%). A mortalidade no pós-operatório também foi superior (6,8%), mas se excluirmos as CR com intuito paliativo/salvação, aproxima-se mais da literatura (5%).

CT 10

MINIMALLY INVASIVE TREATMENT OF RECTUM-URETHRAL FISTULA AFTER FOURNIER'S GANGRENE USING OTSC SYSTEM

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Introduction: Rectum-urethral fistulas (RUFs) are abnormal connections between the rectum and urethra, causing fecaluria, pneumaturia, and recurrent UTIs. They often result from surgical trauma (e.g., radical prostatectomy), infections, inflammatory bowel disease, or radiation. Fistulas, especially those secondary to infections like

Fournier's Gangrene, pose significant therapeutic challenges due to anatomical complexity and poor tissue healing. While surgical repair has been the standard treatment, it often carries high risks and prolonged recovery. Considering other options, minimally invasive techniques like the Over-The-Scope Clip (OTSC) system have emerged as promising alternatives. Originally designed for the endoscopic closure of gastrointestinal fistulas, the OTSC system provides a mechanical closure by apposing tissue edges, allowing for natural healing without the need for open surgery. Its ability to offer durable closure in difficult-to-access areas, along with a reduced risk of complications, makes it particularly attractive for patients who are poor candidates for surgery or those with small fistulas.

Objective: This report demonstrates successful use of the OTSC system for managing a rectum-urethral fistula in a Fournier's Gangrene patient, highlighting its potential as a minimally invasive alternative.

Materials and Methods: A 55-year-old diabetic male was referred to our institution in February 2024 with a suspected RUF. His history, symptoms, and imaging were reviewed.

Results: The patient was initially admitted to another hospital for treatment of Fournier's Gangrene, during which he underwent urgent debridement, a Hartmann's procedure (colostomy), and a prolonged course of antibiotics. Although the patient initially stabilized, he later developed urinary complications, including fecaluria and recurrent urinary tract infections (UTIs), despite Foley catheterization. A cystoscopy and rectal examination revealed the presence of a recto-urethral fistula, likely resulting from extensive tissue damage caused by the infection and surgeries. A cystostomy catheter was then placed for further urinary diversion. While awaiting MRI, a total colonoscopy identified a fistulous orifice in rectum, confirming fistulous tract between the rectum and prostatic urethra after instillation of methylene blue. Following multidisciplinary discussions, the OTSC system was chosen due to the patient's surgical history and the small fistula size. A flexible endoscope was introduced through the rectum, visualizing the fistula, and the OTSC clip was successfully applied to close the tract, with anchoring provided by the Ancor device. The procedure was done under Foley catheterization to maintain urethral patency, preventing iatrogenic injury, and aiding the healing process. Immediate closure was confirmed endoscopically. The patient tolerated the procedure well, with no postoperative complications. Over the following weeks, he was closely monitored for recurrence or infection. At the one-month follow-up, the patient reported complete resolution of fecaluria and pneumaturia. Follow-up urethrocystography and a barium enema confirmed successful closure of the fistula.

Discussion/Conclusion: This case shows that the OTSC system is a safe and effective minimally invasive option for treating rectum-urethral fistulas, offering a less invasive alternative to traditional surgical methods. The OTSC system allows for durable fistula closure with fewer complications and a quicker recovery. While further research and long-term follow-up studies are necessary to fully assess its efficacy in treating complex fistulas, this case highlights its promise as a reliable tool for fistula management in carefully selected patients.

CT 11

UROSTENT STUDY: A PROSPECTIVE, RANDOMIZED COMPARISON OF CONVENTIONAL STENTS VS PIGTAIL SUTURE STENTS

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Introduction: The double-pigtail ureteral stent has become a fundamental tool in urology for maintaining ureteral patency in various clinical situations. However, despite its effectiveness, the stent often causes significant discomfort, collectively referred to as "stent syndrome." This syndrome affects over 80% of patients, with symptoms including irritative voiding, pain and hematuria. To mitigate these adverse effects, the JFIL pigtail suture stent (PSS) was developed, featuring a thinner suture thread at the lower end to reduce bladder irritation while maintaining the stent's functionality. Although initial results are promising, comprehensive clinical trials are needed to confirm the PSS's efficacy, safety, and potential to improve patients' quality of life, potentially positioning it as a superior alternative to traditional stents.

Objectives: This study aims to compare clinical outcomes and renal function between conventional ureteral Stents (CS) and PSS and assess quality of life and symptom presence using the Ureteric Stent Symptom Questionnaire (USSQ).

Material and methods: This was a prospective, randomized cohort study involving two groups of patients receiving either CS or PSS between February and June 2024. Participants were followed for one month post-stent placement, with data collected on clinical improvement, renal function,

and stent-related symptoms. Quality of life was assessed using the Ureteric Stent Symptom Questionnaire (USSQ). The primary outcomes included clinical improvement, renal function, and symptom presence. Statistical analyses were conducted to compare outcomes between the two groups. Exclusion criteria included distal ureter obstruction, proximal obstruction by calculi less than 10mm, absence of a CT scan within the last 3 months, and solitary kidney.

Results: A total of 32 patients were enrolled, with 17 receiving conventional ureteral stents (CS) and 15 receiving pigtail suture stents (PSS). No postoperative complications occurred in these patients. Using the USSQ, the PSS group had significantly better results in the Urinary Symptoms Index score, Pain Index score, Pain Intensity, and General Health Index score of the questionnaire. Among patients who had previously received a CS and later a PSS, the PSS scored significantly better in the Urinary Symptoms Index score and the "Feeling about Stenting in the Future" score. There were no significant differences in the results between gender and age groups.

Discussion/Conclusions: The PSS demonstrates clear advantages over CS, particularly in reducing symptoms associated with "stent syndrome," such as urinary discomfort and pain. In this research, the group treated with PSS reported an overall improvement in quality of life. Notably, the patients who have tried both types of stents prefer PSS, citing greater comfort and reduced anxiety about future stenting procedures. The absence of postoperative complications in either group and the lack of significant differences across gender or age further support the safety and efficacy of the PSS.

While the findings from the present study are optimistic, the PSS still faces two significant obstacles. It is important to remember that it has strict indications and is not safe in cases of distal ureteral obstruction or small proximal obstructive lithiasis - due to the risk of stone migration. Additionally, since evidence is currently limited, future large-scale studies will be crucial in confirming the long-term benefits and broader clinical applicability of the PSS, as well as validating its clinical indications and limitations.

CT 12

ASSOCIAÇÃO ENTRE INFEÇÕES SEXUALMENTE TRANSMISSÍVEIS E CANCRO DA PRÓSTATA: UMA ANÁLISE PROSPETIVA

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Introdução: A inflamação crónica e as infeções têm sido implicadas na patogénese do cancro da próstata (CaP). Apesar dainvestigação, a associação entre infeções sexualmente transmissíveis (ISTs) e CaP permanece inconclusiva e controversa.

Objetivo: Avaliação da presença de agentes associados a ISTs em doentes com CaP em comparação com um grupo controlo.

Métodos: Estudo multicêntrico prospetivo incluindo 239 doentes com suspeita clínica de CaP. Entre os participantes, 176 tinham CaP confirmado histologicamente, enquanto 63 com histologia benigna serviram como grupo controlo. Foram colhidas amostras de urina, zaragatoa da glande e biópsias da próstata de cada participante e analisadas com reação em cadeia da polimerase (PCR) para pesquisa de *Candida spp.*, *Chlamydia trachomatis*, *Mycoplasma genitalium*, *Neisseria gonorrhoeae*, *Trichomonas vaginalis*, vírus do herpes simples tipos 1 e 2, e o papilomavírus humano.

Resultados: Obteve-se um total de 717 amostras. A prevalência de agentes patogénicos relacionados com ISTs foi baixa em todos os tipos de amostras. O *Mycoplasma genitalium* foi o microorganismo mais frequente, particularmente em amostras de biópsia da próstata. Não foi demonstrada uma associação estatisticamente significativa entre a presença destes agentes e a presença de CaP. A *Neisseria gonorrhoeae* e *Candida spp.* não foram detetados em nenhuma das amostras.

Conclusão: Este estudo não mostrou uma associação entre a presença de patogénios associados a ISTs e o CaP. A baixa prevalência de agentes patogénicos associados a ISTs, apesar do uso de métodos de PCR, sugere que estas infeções podemdesempenhar um papel limitado na carcinogénese do CaP. Futuras investigações devem passar pelo análise do microbioma urinário e prostático de forma a ampliar a compreensão do papel da microbiologia no CaP.

CT 13

CHALLENGES AND BENEFITS OF TRANSITION APPOINTMENTS FOR YOUNG ADULTS WITH NEUROUROLOGICAL NEEDS

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The transition from pediatric to adult healthcare services presents a complex and critical juncture for young adults with lifelong neurourological needs. This paper delves particularly into the challenges and benefits associated with the transition appointment process for this vulnerable population; recognizing the unique requirements of young adults facing neurourological conditions; and, emphasizing the importance of a well-structured transition plan that accounts for medical, social, and psychological aspects.

Challenges during this transition period include: the potential loss of continuity of care, differences in healthcare systems, limited adult providers with experience in neurourological conditions, and the emotional stressors associated with leaving familiar pediatric settings. These challenges can lead to gaps in care, worsened health outcomes, and increased healthcare costs.

Conversely, it bears highlighting the significant benefits of a well-executed transition process. A seamless transition can empower young adults to take ownership of their healthcare, foster independence, and enhance their overall quality of life. Furthermore, it can mitigate the risk of medical crises and ensure that individuals receive appropriate and timely care throughout their adulthood.

We observed that our medical team struggled with young adult patients with neurourological conditions due to some difficulties in the approach and management of said patients. Some of them would stay in pediatric urology for several years after the transition due to a need for maintenance of care and lack of other approaches. Collaborations between teams were frequent but difficult due to logistic and organizational problems.

With this knowledge, in our Medical Center, we begin our transition appointments with a multidisciplinary team involving Urology, Pediatric Surgery and a nursing team in a familiar, comfortable environment, thereby ensuring an efficient and pleasant transition to adult urology. This process allows training and experience sharing of a medical team that is well equipped to deal with patients whose conditions are rare in adult urology. Furthermore, it allows for the acknowledgement of individual patients' needs, forming an effective treatment plan for each patient in a multidisciplinary environment and allowing interteam surgical management of young patients through surgical procedures not very frequent in adult urology.

So far, several patients have successfully transitioned to adult urology, while some maintain transition appointments, including a few surgical procedures made in cooperation with both specialties.

At this point, we consider our transition appointments a clear success and a valuable asset in the management of young chronic urological patients, underscoring the importance of a multidisciplinary approach involving healthcare providers, caregivers, and the young adults themselves. Key elements of successful transition appointments include early planning, education, clear communication, and the establishment of adult care providers with experience in neurourological conditions. Additionally, peer support and the utilization of technological tools can aid in easing the transition process.

In conclusion, the transition of young adults with lifelong neurourological needs from pediatric to adult services is a complex journey filled with challenges and opportunities. By recognizing these challenges and proactively addressing them, healthcare systems can optimize the transition experience, ensuring improved health outcomes, enhanced quality of life, and a more seamless transition for this vulnerable population

CT 14

REAL DATA FROM 1 YEAR OF TRANSRECTAL PROSTATE BIOPSIES: KEY FACTORS AND COMPLICATIONS

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Introduction: Prostate cancer is the second most common cancer in men, with a worldwide prevalence estimated at 1.4 million. Screening for prostate cancer is typically based on digital rectal examination and/or PSA levels. Imaging and clinical factors guide physicians in deciding to request a prostatic biopsy. Among these factors, it is important to highlight the PSA density, MRI results, potential co-morbidities, life expectancy and performance status.

Material and methods: We retrospectively assessed 448 men who underwent a prostate biopsy (either transrectal systematic biopsy or cognitive-guidance MRI-targeted transrectal biopsy, which includes systematic and targeted cores) at the Urology Department of Hospital de

Braga in 2023. Our analysis included factors such as age, digital rectal examination results, PSA density, antibiotic usage before biopsy, rates of post-biopsy complications, MRI PI-RADS classification and ISUP grade on histology.

Results: Eighty-nine percent (89%) of the patients received fosfomycin as a prophylactic antibiotic, 9.6% received cefixime, and the remaining patients received other antibiotics. Patients were informed about potential complications, so only complications requiring hospitalization were included. Overall, only 6% of the patients went to the emergency department: 5 patients (1.12%) were diagnosed with prostatitis and were treated on an outpatient basis and 1 patient needed to be admitted.

Two hundred and thirty-six (53%) patients underwent transrectal systematic biopsy, 205 (46%) underwent cognitive-guidance MRI-targeted transrectal biopsy, and 7 (1%) underwent only targeted transrectal biopsy (after a prior negative systematic biopsy with MRI PI-RADS ≥3).

In the group that underwent "cognitive guidance MRI-targeted biopsy," the accuracy rate for ISUP≥1 was 65.37%, while in the group that underwent systematic biopsies, the accuracy rate for ISUP≥1 was 63.14%. In the "cognitive guidance MRI-targeted biopsy" group, 6% of the positive prostate cancer fragments (cores) with ISUP≥1 was only visualized in the targeted biopsy, 27% only in the systematic biopsy, and 67% in both targeted and systematic fragments.

In the group with a suspicious digital rectal examination, 73.46% had histology ISUP≥2, whereas in the group with an unsuspected digital rectal examination, only 46.07% had histology ISUP≥2.

In the group of patients who underwent MRI after systematic biopsy, the rate of clinically significant prostate cancers (ISUP≥2) was 94.74% for patients with MRI PI-RADS 5, 78.57% with MRI PI-RADS 4, 50% with MRI PI-RADS 3, and 8.33% with MRI PI-RADS 2.

Conclusions: In conclusion, transrectal prostate biopsy presents very low rates of complications requiring hospitalization. Magnetic Resonance Imaging, despite its importance in the decision to perform a prostate biopsy, may be omitted in certain patients.

CT 15

NEFRECTOMIA PARCIAL ROBÓTICA COM HUGO-RAS: AVALIAÇÃO DA CURVA DE APRENDIZAGEM

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O sistema Hugo™RAS (Medtronic Inc.) é uma nova plataforma de cirurgia robótica com características distintas, incluindo uma consola com visão 3D-HD e braços robóticos em carrinhos individuais, oferecendo flexibilidade no posicionamento dos trocares. A nefrectomia parcial assistida por robô (RAPN) é uma inovação significativa, mas a literatura sobre o uso do sistema Hugo-RAS, e a sua aprendizagem, é limitada. Este estudo visa analisar os resultados, a segurança e a curva de aprendizagem da RAPN com o sistema Hugo-RAS em um centro especializado em cirurgia laparoscópica renal.

Foram colhidos dados pré-operatórios. O R.E.N.A.L. score foi utilizado para avaliar a complexidade das massas renais. O trifecta foi definido como um tempo de isquemia inferior a 25 minutos, ausência de margens positivas e ausência de complicações cirúrgicas (Clavien-Dindo II ou superior). Foram avaliados o tempo de docking, o tempo de consola e o tempo de internamento.

33 doentes foram submetidos a uma RAPN no nosso centro hospitalar durante um ano. O tamanho mediano dos tumores foi de 33 mm (IQR: 24-42), e um R.E.N.A.L. score médio de 7,5.

O tempo mediano de consola foi de 89 minutos (IQR: 76-108) e o tempo mediano de docking foi de 5 minutos (IQR: 4-6,8) As perdas sanguíneas medianas foram de 100 mL (IQR: 50-450) e o tempo de isquemia renal quente mediano foi de 19 minutos (IQR: 16-23). Não houve registo de conversões nem complicações intraoperatórias. A mediana de dias de internamento foi de 3 dias.

A avaliação histológica revelou que 29 doentes (86%) tinham patologia maligna. Apenas 2 pacientes apresentaram margens positivas. No total, 27 pacientes (82%) alcançaram o trifecta.

Em termos de curva de aprendizagem, foi efetuada uma análise em tercis do tempo de cirurgia e do R.E.N.A.L score de soma cumulativa (CUSUM) para ambos os cirurgões que realizam RAPN. Importa referir que apenas dois cirurgiões realizam este procedimento no nosso hospital, tendo ambos alta diferenciação em cirurgia laparoscópica renal, estando presentes em todos as RAPN ou como cirurgiões principais ou como ajudantes.

A avaliação por tercis (T), em termos de tempo operatório, demonstrou o 1ºT com uma mediana de tempo de 106 minutos enquanto que o 3ºT apresentou um tempo de 89 minutos, no entanto esta diferença não é estatisticamente significativa (**p=0.7**). Efetuamos uma análise semelhante para o R.E.N.A.L score, esta análise demonstrou que o 1ºT de doentes operados tinham em média um R.E.N.A.L score de 7,5 enquanto que o 3ºT apresentava uma média de 8,6 (**p=0.0384**). Portanto, há uma diminuição do tempo cirúrgico mesmo com um aumento da complexidade do tumor.

Analisando isoladamente cada tempo cirúrgico consoante o cirurgião, o cirurgião A realizou no total 15 RAPN com uma média de tempo de 96 minutos (σ= 20 minutos). A análise CUSUM, que se encontra no gráfico 1, demonstra que a partir da 5ª cirurgia, o cirurgião encontra-se na linha de base da média, não obstante observa-se marcada variação após, podendo-se dever a cirurgias mais complexas ou dificuldades técnicas.

O cirurgião B realizou um total de 18 procedimentos numa média de 89 minutos (σ=24 minutos). A análise CUSUM do cirurgião B (gráfico 2) demonstra uma melhoria constante de performance a partir da 6ª cirurgia, alcançando aproximadamente na 12ª cirurgia uma performance constante próxima da média, os valores deste cirurgião são mais constantes na melhoria.

As análises deste trabalho sugerem que o sistema Hugo-RAS é uma opção viável e promissora para a RAPN, aparentemente com uma aprendizagem rápida, em cirurgiões com alta diferenciação em cirurgia renal laparoscópica, mesmo com um aumento da complexidade dos tumores.

CT 16

LOCALLY ADVANCED CLEAR-CELL RCC WITH DIRECT INVASION OF DIAPHRAGM - A CASE REPORT

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Introduction: Standard-of-care for locally advanced renal cell carcinoma (RCC) includes resection of tumour when feasible followed by adjuvant immune-therapy. However, in cases of direct invasion of adjacent structures there is a lack of standardised management guidelines, often requiring a multidisciplinary team approach in order to determine feasibility of complete resection, since surgical management is often accompanied by the risk of severe iatrogenic morbidity and mortality.

Objectives: To present a case-report of a RCC with direct invasion of the diaphragm.

Materials and methods: Retrospective analysis of patient records.

Results: 48 Year-old Caucasian male, with an incidental finding of right kidney mass on abdominal ultrasound. There was no history of flank pain, gross haematuria or constitutional symptoms. On physical examination there were no palpable abdominal or flank masses, no macrohaematuria or abnormalities on urinalysis. Abdominal CT scan and MRI showed a heterogeneous mass on the posterior aspect of the superior pole of the right kidney, with 113x90x110mm, with suspected invasion of posterolateral aspect of the right hemidiaphragm. No distant metastatic disease was evident. After multidisciplinary team decision, patient underwent surgery, through a thoraco-abdominal incision at the level of the 8th right intercostal space with extension to the midline. Right nephrectomy with partial excision of right hemidiaphragm with negative macroscopic margins was performed. The diaphragmatic defect was substituted with a polypropylene mesh which was fixated to the remaining diaphragm and abdominal wall with interrupted nonabsorbable sutures. The postoperative period was uneventful. Histopathological examination revealed a 115mm tumour with invasion of Gerota's fascia and diaphragm. Histological analysis revealed predominant spindle-shaped cells and cells coexistent with trabecular patterned cells with clarified cytoplasm with moderate nuclear atypia, compatible with clear cell renal carcinoma with sarcomatoid differentiation (G3, ISUP 4, R0). At multidisciplinary team reunion patient was proposed for adjuvant Pembrolizumab, but drug approval was not obtained. CT Imaging and symptomatic surveillance were decided. Follow-up scan at 9 months revealed local recurrence at the level of posterior abdominal wall and 11th right rib, as well multiple bilateral pulmonary lesions suggestive of metastatic disease. Patient was proposed for systemic treatment with Nivolumab plus Ipilimumab.

Conclusion: Systemic treatment options for locally advanced RCC are still limited and *en-bloc* resection of tumour and invaded structures provides the best chance to improve survival outcomes and achieve symptomatic relieve. Despite aggressive surgical treatment and adjuvant therapies, the prognosis for patients with locally advanced RCC remains poor, with 3-year survival rates between 5-20%.

CT 17

PROSTATITE GRANULOMATOSA EOSINOFÍLICA - NEM TUDO É O QUE PARECE

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Introdução: Prostatite granulomatosa não especifica é uma entidade relativamente rara, correspondendo a uma inflamação temporária da próstata e que pode mimetizar o comportamento de adenocarcinoma da próstata, quer ao exame físico quer nos meios complementares de diagnóstico. Por este motivo é fundamental o seu correto diagnóstico e distinção de outras entidades malignas.
Objetivos: Descrição de um caso clínico de um doente com queixas miccionais e toque retal suspeito em contexto de inflamação eosinofílica crónica da próstata.
Métodos: Revisão do processo clínico do doente e revisão da literatura.
Resultados: Homem de 63 anos, antecedentes de asma, em seguimento em consulta de imunoalergologia, encaminhado para consulta de urologia por *LUTS* mistos com predomínio de sintomas de esvaziamento e toque retal suspeito. Do estudo analítico realizado apresentava um *PSA* de 0.24, sem eosinofilia periférica. Ao exame físico apresentava um toque retal suspeito, com nódulo duro palpável à direita. O restante exame físico não apresentava alterações de relevo. A ressonância magnética prostática revelou lesão classificada como *PIRADS* 5, ocupando toda a zona de transição, bem como um nódulo infracentimétrico *PIRADS* 4 na zona periférica direita. A biópsia prostática transretal sistemática e dirigida por fusão cognitiva das lesões descritas demonstrou tecido prostático com marcada inflamação aguda e crónica, incluindo infiltrado por eosinófilos na totalidade dos fragmentos recolhidos, sem evidência de malignidade, compatível com prostatite granulomatosa crónica com eosinofilia. O exame micobacteriológico de urina foi negativo. O doente mantém-se em seguimento para vigilância imagiológica, da sintomatologia e dos níveis de *PSA*.
Discussão/conclusões: Prostatite granulomatosa não especifica é uma entidade rara, podendo representar até 3% das variantes histológicas identificadas em biópsias prostáticas. É definida histologicamente como uma inflamação granulomatosa do tecido prostático em resposta a diversas agressões, tais como como tuberculose genito-urinária, infeções fúngicas, cirurgias ou doenças granulomatosas sistémicas. A variante eosinofílica encontra-se escassamente descrita na literatura, em indivíduos com historial de atopia ou asma, ou mesmo no contexto de síndromes sistémicos como poliangeíte granulomatosa com eosinofilia (Síndrome de *Churg-Strauss*), podendo mimetizar adenocarcinoma prostático ao toque retal em até 50% dos doentes à apresentação. A distinção é feita através do exame histológico das peças de biópsia, sendo por vezes necessário recurso a marcadores imunohistoquímicos para confirmação do diagnóstico. O tratamento é geralmente sintomático, podendo ser necessário corticoterapia em casos mais severos ou muito sintomáticos. O diagnóstico diferencial com carcinoma da próstata é fundamental, em particular na variante com eosinofilia, na qual alguns autores encontraram associação entre a existência de metaplasia eosinofílica e o desenvolvimento de carcinoma da próstata.

CT 18

ABERRANT INTER-CALYCEAL COMMUNICATION BETWEEN MOIETIES IN A COMPLETE URETERAL DUPLICATION

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Upper urinary tract obstruction represents one of the most common urologic emergencies and in specific scenarios warrant an immediate urinary drainage procedure. In such scenarios, it is of paramount importance to evaluate the anatomy of the urinary tract and explore anatomical variants such as duplex anomalies since, in this particular circumstance, there is a risk of faultily and ineffectively drain a non-obstructed moiety, if just one of the moieties is affected.
Here we present a particular clinical case in which "mis-drainage" of a non-obstructed renal moiety did not turn out to be ineffective due to an unique variation of a complete ureteral duplication.
Complete Ureteral Duplication is a consequence of a variation in the embryological development of the urinary tract, in which there is an abnormal growth of an extra ureteral bud from the mesonephric duct, giving rise to two completely separated renal collecting systems. Communication between moieties is not expected and to the best of our knowledge, this is the first case report describing this anatomical variation. This aberrant communication might be able to ensure drainage of an eventual obstruction of the other moiety, potentially obviating the need for an emergent urinary drainage procedure.

This case report adds knowledge to the field and highlights the importance of carefully evaluation of the urinary tract.

CT 19

A SNAPSHOT OF THE PROSTATE CANCER MDT IN A PORTUGUESE TERTIARY CENTER

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Introduction: Prostate cancer is the second most common cancer among men worldwide. It is a complex field, in which several therapeutic options often exhibit similar efficacy, necessitating a tailored approach. Multidisciplinary team (MDT) meetings are essential in this setting, enhancing diagnostic accuracy and treatment effectiveness, exemplifying patient-centered healthcare.We aim to describe a year of prostate cancer MDT in a Portuguese tertiary center and to determine the frequency of castration resistant non metastatic prostate cancer.

Methods: We retrospectively reviewed all cases submitted and discussed in our tertiary center prostate cancer MDT from March 2022 to March 2023. Patient's electronic medical records were queried, and data was recorded in a database for analysis. This study was approved by our institution ethics committee. Data confidentiality was assured.

Results: During the one year study time frame 347 patients were discussed in our prostate cancer MDT. Discussion of primary treatment was the cause of MDT discussion in 191 (55.0%) of the cases. Of these, 164 (85,9%) were non-metastatic (M0) and 27 (14,1%) presented metastasis (M+).In the group of M0 patient's, median(IQR) PSA at presentation was 8.3(0,8) ng/mL. Of the M0 patients: 130 (79,3%) were proposed for radiotherapy and hormonotherapy, 15 (9,2%) for active surveillance, 9 (5,5%) for brachytherapy, 5 (3,0%) for watchful waiting and 2 (1,2%) for radical prostatectomy.

The second most frequent reason for MDT discussion was progression or recurrence- 119 (34,3%) patients. Of these, 33 were M0 and 86 were M+. From the M0 group of patient's presented for progression or recurrence only 3 (9,1%) were castration resistant. In the case of M+ we found 52 (60,4%) patients in the castration resistant setting.

Less frequent causes of MDT discussion were therapy side effects- 6 cases (1,7%), case re-evaluation- 5 cases (1,4%) or image reanalysis- 2 cases (0,6%).

Conclusion: Non metastatic castration resistant prostate cancer is a rare entity. MDT's have a crucial role in facilitating tailored and effective treatment decisions for both non-metastatic and metastatic prostate cancer

CT 20

ACTIVE SURVEILLANCE IN PATIENTS WITH LOW-RISK PROSTATE CANCER – THE EXPERIENCE OF A TERTIARY CENTER

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Introduction: Active surveillance aims to avoid unnecessary treatment in men with localized prostate cancer who do not require immediate intervention, through regular follow-up programs that include physical examinations, PSA measurements, prostate MRI, and serial prostate biopsies, while simultaneously determining the appropriate time to initiate active therapy for patients who reach predefined thresholds indicative of potentially fatal but still curable disease, considering each patient's life expectancy. The recommended protocols for monitoring this patient population are diverse and highly rigorous, making absolute compliance challenging

Objetives: To characterize the population of prostate cancer patients undergoing active surveillance at a tertiary care center and factors associated with need for curative treatment during follow up.

Methods: Patients with prostate cancer who were under active surveillance at our center during the period from 2020 to 2023 were selected. Clinical, laboratory, and histopathological data were collected retrospectively through a review of the patients' medical records. Univariate and multivariate analysis were done to analyze factors associated with need for curative treatment. [CB1]

Results: 116 men with a mean age at diagnosis of 66.5±8.8 years were followed up in active surveillance consultations over a highly variable period (from 226 days to 19 years). The median PSA value and PSA density at diagnosis were 5.2 (IQR 0.3-18.3) and 0.09 (IQR 0.003-2.371[CB2]), respectively. The diagnosis of prostate cancer was made through a double sextant transrectal/ transperineal biopsy in 52 patients and through a transperineal fusion biopsy in 44 patients. In the remaining 20 patients, the diagnosis was made by histopathological analysis of specimens from benign

prostatic surgery (open and endoscopic). The most frequently observed Gleason score in the diagnostic biopsy was 3+3 in 94% of cases and 3+4 in 6%. The confirmatory biopsy revealed a Gleason score of 3+3 in 50% of cases. An upgrade in the Gleason score was observed in 15.5% of cases during the confirmatory biopsy or subsequent protocol biopsies (11.2% to 3+4, 3.4% to 4+3, and 0.9% to 4+4), with 13.8% of patients undergoing curative treatment (radical prostatectomy and external beam radiation therapy combined with hormone therapy). In 7 patients, the strategy was changed to watchful waiting due to life expectancy. Patients with a confirmation biopsy at diagnosis with a gleason score higher than 3+3 and a higher difference between maximum PSA value during follow up and PSA value at diagnosis have a higher probability of need for a curative treatment ($p=0.006$ and $p<0.001$, respectively), even adjusted for PSA value at diagnosis ($p=0.033$ and $p=0.001$, respectively).

Conclusions: Our experience supports earlier findings that active surveillance is a safe management approach for men with low-risk prostate cancer. This strategy should be strongly advocated for these patients, as it mitigates treatment-related complications while maintaining effective cancer control. Patients with a gleason score higher than 3+3 at diagnosis and a higher difference between maximum PSA value during follow up and PSA value at diagnosis should be kept under closer surveillance due to higher probability of need for curative therapy. More studies are needed to corroborate these findings.

CT 21

EARLY EXPERIENCE WITH KOELIS® IN IMAGE-FUSION PROSTATE BIOPSIES: A RETROSPECTIVE STUDY

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Introduction: MRI fusion biopsies have enhanced the detection of clinically significant prostate cancer by improving lesion targeting precision. This technology combines superior MRI imaging with real-time ultrasound, thereby improving diagnostic accuracy and reducing unnecessary biopsies. It is particularly beneficial for patients with previous negative biopsies or inconclusive findings. KOELIS® is a relatively new ultrasound technology designed for image-fusion prostate biopsies. While it shows potential for improving prostate cancer detection accuracy, real-world clinical data remain limited. In our center, KOELIS® has been used for the past three months, and we aim to share our initial experience.

Objective: To analyze the outcomes of patients who underwent image-fusion prostate biopsies using KOELIS®.

Methods: We included all patients who underwent MRI fusion prostate biopsy using KOELIS® between June and August 2024. The procedure involved real-time ultrasound fused with MRI to target suspicious areas for biopsy. Patient demographics, Prostate Imaging Reporting and Data System (PIRADS) scores, PSA values, and PSA density were analyzed, along with histopathological results.

Results: The sample included 22 patients. Of these, 13 had one lesion, 6 had two lesions, and 3 had three lesions, totaling 31 lesions detected on MRI. Of these lesions, 26 were characterized as PIRADS ≥ 4. PSA values ranged from 2.88 ng/mL to 30.7 ng/mL, with a mean of 10.34 ng/mL. PSA density ranged from 0.06 to 0.57, with a mean of 0.15. Histopathological results revealed prostate cancer in 14 patients (64%), including 3 with previous negative biopsies. Regarding grading, 43% were classified as ISUP 1, 21% as ISUP 2, 14% as ISUP 3, and 21% as ISUP 4.

Conclusion: Our initial experience with KOELIS® for image-fusion prostate biopsies shows promising results, with a 64% positive biopsy rate. The majority of detected lesions were PIRADS 4 and 5, and KOELIS® provided accurate targeting even in patients with previous negative biopsies. Further studies are needed to validate its long-term impact on prostate cancer detection and patient outcomes.

CT 22

TRANSPERINEAL BIOPSIES IN THE DETECTION OF PROSTATE CANCER: DATA FROM A TERTIARY CENTER

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ULS Santa Maria

Introduction: Prostate cancer (PCa) is a leading cause of morbidity and mortality worldwide. Diagnostic modalities such as prostate-specific antigen (PSA) levels, PSA density (PSAd), and multiparametric magnetic resonance imaging (mpMRI) have significantly improved PCa detection and stratification. However, the optimal transperineal biopsy technique and the influence of parameters such as PSAd on the detection of

clinically significant prostate cancer (csPCa) remain under investigation.

Objectives: This study aims to evaluate the efficacy of different transperineal biopsies modalities and their association with prostate cancer detection rates in relation to PSA density and prostate volume.

Material & methods: We retrospectively analyzed 227 patients submitted to transperineal biopsies from July 2023 to June 2024 in a tertiary center. Data was extracted from clinical records and analyzed using JASP. The association between two categorical variables was evaluated by using the Chi-square test, with p-values <0.05 deemed statistically significant.

Results: This study included 227 patients with a median age of 69 years (range:47-89 years). The median total PSA level was 9ng/mL (IQR: 6.5-14ng/mL), and the median PSA density (PSAd) was 0.18ng/mL2 (IQR: 0.11–0.29ng/mL2).

In terms of MRI findings, 16.3% of patients had a PI-RADS 3 lesion, 36.6% had a PI-RADS 4 lesion, and 30.4% had a PI-RADS 5 lesion. Of the remaining patients, 7.0% had no classifiable lesions, and 9.7% did not undergo pre-biopsy MRI. Regarding biopsy technique, 63.9% of the patients underwent transperineal MRI-ultrasound fusion-guided biopsy, 20.7% underwent transperineal cognitive-guided biopsy, and 15.4% underwent systematic biopsy. There was no statistically significant difference in the detection of PCa across the three biopsy methods (p=0.137), nor in the detection of csPCa (p=0.145).

In terms of the International Society of Urological Pathology (ISUP) grading, the distribution was as follows: ISUP 1, 21.2%; ISUP 2, 12.2%; ISUP 3, 14.5%; ISUP 4, 8.4%; ISUP 5, 5.3%. Moreover, 37.0% of patients had no evidence of malignancy, while 0.4% had a neuroendocrine tumor. In patients with a PSAd <0.1, the detection rate of neoplasia was 34%; in those with a PSAd of 0.1–0.14, it was 32%; in those with a PSAd of 0.15–0.2, the detection rate rose to 59%, and in patients with a PSAd > 0.2, the detection rate was 82%. The difference in PSAd between these four groups was statistically significant for the detection of neoplasia (p < 0.001). Moreover, there was a statistical difference between the groups with PSAd of 0.15–0.2 and a PSAd > 0.2 in PCa detection rates (p=0.003), particularly in the detection of csPCa (p=0.01).

There was also a statistically significant difference in neoplasia detection rates based on prostate volume (p<0.01). In patients with small prostates (<40cm³), the detection rate was 58.9%; in those with medium-sized prostates (40-80cm³), it was 80%; and in those with large prostates (>80cm³), the detection rate was 34% (p>0.01).

Conclusion: This study highlights the importance of PSAd and prostate volume in the detection of PCa. The results show that while no significant difference was observed between biopsy techniques in detecting PCa or csPCa, PSAd is an important marker for cancer detection. Patients with PSAd values >0.15 exhibited a marked increase in neoplasia detection rates compared to those with lower PSAd levels. The results also suggest that a PSAd between 0.15 and 0.2 could serve as a critical threshold for considering biopsy, while PSAd >0.2 should prompt strong consideration for diagnostic procedures, considering the statistical difference between these subgroups. Regarding prostate volume, increased PSA levels in patients with bigger prostates is expected. These patients, more frequently, undergo unnecessary biopsies, therefore PSAd may be a valuable marker to assess the risk of PCa.

CT 23

DEVELOPMENT OF THE EUROPEAN ASSOCIATION OF UROLOGY TRANSURETHRAL TRAINING CURRICULUM STEP 1 (TUT-S1)

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Introduction: The European School of Urology (ESU) and the European Association of Urology (EAU) sections are developing the Standardization in Surgical Education (SISE) program, a comprehensive approach to surgical education, encompassing 10 structured, standardized, and validated training curricula. One of the cores of the SISE program is the Transurethral Training curriculum (TUT), which will provide a structured approach to training the most important and frequent transurethral procedures.

OBJECTIVES: We aim to describe the process of designing and validating the basic step of the TUT curriculum (TUT-S1).

Material and methods: The EAU Lower Urinary Tract Working Group (EAU LUT WG) was created with the aim of designing, validating and implementing the TUT curriculum. According to the principles of the SISE program, the TUT curriculum

should be based on modular hands-on training and be organized into three progressive levels of complexity: basic (TUT-S1), intermediate (TUT-S2), and advanced (TUTS3).

Results: The process of designing the TUT-S1 was composed of 5 phases. In the 1st phase, a literature review was performed to identify models (basic dry-lab, advanced dry-lab, virtual reality and cadaveric) available to train basic transurethral procedures. In the 2nd phase, to define the overall characteristics of the TUT-S1, a series of structured consensus meetings were performed, reaching a consensus that TUT-S1 should focus on basic skills, use basic dry-lab models and not require a dedicated training center. In the 3rd phase, to select the procedures to include in TUT-S1, the EAU LUT WG identified all the transurethral diagnostic and therapeutic procedures recommended by the EAU guidelines and requested a series of experts (from the EAU Section of Uro-technology, the EAU non-muscle invasive bladder cancer and management of non-neurogenic male LUTS guidelines panels and the Young Academic Urologists) to identify the procedures that should be mastered by urology residents in the beginning of their training. The procedures to achieve ≥80% consensus were: rigid cystoscopy, flexible cystoscopy, transurethral bladder biopsies and direct vision internal urethrotomy. In the 4st phase, the hands-on training experts of the EAU LUT WG designed the four exercises that would compose the TUT-S1: flexible cystoscopy, rigid cystoscopy with bladder biopsies, basic resection loop handling with bladder biopsies and direct vision internal urethrotomy. In the 5ft phase, the EAU LUT WG conducted a small-scale test during the EAU annual congress, with 12 trainees and urologists to evaluate the practical feasibility of the TUT-S1. Finally, in the 6th phase, the EAU LUT WG conducted a series of large-scale tests during the European Urology Residents Education Programme (EUREP), an ESU Urology Boot Camp and a hands-on training course in surgical treatment of benign prostatic obstruction, enrolling 98 urologists, senior residents and junior residents.

Discussion/conclusions: The TUT-S1 is the basic step of the EAU TUT curriculum and has been designed and validated with the aim of providing the basic technical skills of the transurethral procedures that should be mastered by every Urology resident at the beginning of their training.

XVIII SIMPÓSIO APU

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