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Abstracts

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Mission statement: To advance the scientific basis of human pathology by the publication (encouragement and dissemination) of high quality research (including molecular and translational studies) and thereby contribute to patient care. Manuscripts of original studies reinforcing the evidence base of modern diagnostic pathology, using immunocytochemical, molecular and ultrastructural techniques, will be welcomed. In addition, papers on critical evaluation of diagnostic criteria but also broadsheets and guidelines with a solid evidence base will be considered. Consideration will also be given to reports of work in other fields relevant to the understanding of human pathology as well as manuscripts on the application of new methods and techniques in pathology. Submission of purely experimental articles is discouraged but manuscripts on experimental work applicable to diagnostic pathology are welcomed. Biomarker studies are welcomed but need to abide by strict rules (e.g. REMARK) of adequate sample size and relevant

marker choice. Single marker studies on limited patient series without validated application will as a rule not be considered. Case reports will only be considered when they provide substantial new information with an impact on understanding disease or diagnostic practice.

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archives. 39 patients (ages 46–55) were included and histology slides and available clinico-biological data were examined.

Results: Our study revealed that the majority of neoplasms were Gleason Score (GS): 7(4 + 3)(28.20 %), 6(3 + 3)(20.15 %) and 7(3 + 4)(17.94 %), grade groups 3, 1 and 2, respectively, predominantly with a distinct/fused glandular and cribriform histologic pattern. Based on clinico-pathobiological data main prognosis Groups were assessed for 24 patients as follows: Group IV(41.66 %), Group III(29.16 %), Group IIb(20.83 %). Anamnestic data revealed that \approx 50 % had associated conditions, mainly cardiovascular, obesity, viral hepatitis and renal diseases. Interestingly, 8 patients were 50 years and younger and displayed GS 7(3 + 4), 5(3 + 2) and 9(4 + 5) with an overall good prognosis.

Conclusion: Our results showed different profiles: patients 50 years and younger with better patho-clinical findings and over 50 with aggressive/metastatic disease with dim prognosis. Young patients' pathologic findings should be carefully integrated in a complete clinico-anamnestic and bio-magistic context.

PS-25-013

Histopathological presentation of sarcomatoid carcinoma of the urinary bladder: A single pathology department based cohort study

I. M. Mihai*, G. E. Olteanu, A. R. Gheju, A. Jurescu, D. Anderco, M. Iacob, D. Herman, A. Dema

*Universitatea de Medicina, Pathology, Timisoara, Romania

Objective: To review the pathological features of sarcomatoid carcinoma (ScC) of the urinary bladder and to provide a retrospective image of this rare neoplastic entity in our pathology department.

Method: We performed a retrospective study of patients with a urinary bladder malignancy diagnosed in our pathology department. Our review covers the clinicopathological data between 2006 to 2017. The exclusion criteria for the study was a diagnosis of a non-urinary bladder malignancy or a diagnosis of urothelial carcinoma with no sarcomatoid component.

Results: Out of 2882 patients diagnosed with a urinary bladder tumour a total number of 30 cases met our selection criteria (1.04 %), 11 (0.38 %) patients were diagnosed with a sarcomatoid histopathological variant and 19 (0.65 %) had only a sarcomatoid tumour component (sTC). The cohort consisted of 23 males and 7 females, with a mean age of 60.1 years. Initial staging of the lesions showed: 3 pTx (10 %), 9 pT1 (33.3 %), 9 pT2 (30 %), 5 pT3 (16.6 %), and 5 pT4 (16 %). On initial presentation: 7 surgical specimens of en bloc radical cystoprostatectomies and 1 cystectomy specimen with hysterectomy with the remaining being represented by transurethral resection of the urinary bladder. On follow-up, 8 patients had local recurrences, furthermore, 4 had higher stage disease.

Conclusion: ScC of the urinary bladder is a pleomorphic cancer with a high index of variability regarding the immunohistochemical profile and remains a relatively rare primary urinary bladder neoplasm. Our results showed a small divergence from the evidence found in the literature regarding the sex of the patient and overall age of initial diagnosis.

PS-25-014

Thyroid transcription factor-1 is expressed in both invasive and non-invasive urothelial carcinomas

S. Sotiriou*, N. Koletsas, M. Lambropoulou, S. Touloupidis, N. Papadopoulos, T. Koletsas

*Aristotle University of Thessaloniki, Faculty of Medicine, Dept. of Pathology, Greece

Objective: Thyroid transcription factor-1 (TTF-1) has been considered as a specific marker for thyroid and lung tumours. Recent data has shown though that a wide range of neoplasms, including urothelial carcinomas, may express TTF-1. Aim of this study is investigate the frequency of TTF-1 positive urothelial carcinomas.

Method: An immunohistochemical study in a series of 40 urothelial carcinomas was performed on tissue microarrays sections (TMAs). Two more cases of urothelial carcinomas were tested in conventional slides. The first concerned a case of a non-invasive low grade urothelial carcinoma and the second was a metastatic to lung urothelial carcinoma.

Results: Out of 42 cases of urothelial carcinomas, five (11.9 %) were positive for TTF-1. Three of them concerned non-invasive papillary urothelial carcinomas and two corresponded to infiltrating urothelial carcinomas, including the metastatic one. There was no association between TTF-1 expression and tumour grade (x^2 , $p = 0.419$) or stage (x^2 , $p = 0.550$), a finding that may be biased due to the small specimen sample.

Conclusion: The observed frequency of TTF-1 positive urothelial carcinomas is higher compared to the results of previous studies. Non-invasive papillary urothelial carcinomas may express TTF-1. Pathologists should be aware of TTF-1 expression by urothelial carcinomas in order to avoid misdiagnosis, notably in metastatic disease.

PS-25-015

Clear cell papillary renal cell carcinoma: A clinicopathologic evaluation of nine cases

B. Igde*, B. Sarsik, K. Sekerzade, F. Kizilay, A. Simsir, S. Sen

*Ege University, Pathology, Izmir, Turkey

Objective: Clear cell papillary renal cell carcinoma (CCP-RCC) is a newly described variant of renal cell carcinoma (RCC), consisting of clear cells arranged in tubulopapillary architecture. CCP-RCC is estimated 1 %–4 % of all resected renal tumours.

Method: We retrospectively evaluated pathological features of nine nephrectomy materials with CCP-RCC diagnosed in our center between 2013 and 2016 years. All cases were stained with antibodies against GATA3, CK7, CAIX, TFE3, RCC and AMACR.

Results: All tumours contained a single layer of clear, cuboidal cells arranged in a tubulopapillary pattern, nuclear alignments of which were away from the basement membrane. Two tumours had smooth muscle stroma. Tumour cells had diffuse CK7 and "cup-shaped" CAIX positivity. Three tumour showed nuclear reactivity for GATA3. Five tumour stained with CD10 focally. None of the tumours were stained with TFE3, RCC and AMACR.

Conclusion: CCP-RCC was included in the 2016 WHO classification. Local recurrence or metastases have not been documented among the cases reported so far. It is therefore very important to distinguish them from clear cell RCC and papillary RCC with similar morphological features. GATA3 is expressed in 30 % of CCP-RCC in our series. Unlike other variants of RCC, GATA3 positivity may contribute to CCP-RCC. Larger series are needed for showing the prognostic importance of CCP-RCC. We presented our cases for showing the importance of differential diagnosis of CCP-RCC.

PS-25-016

Hsp 90 overexpression in chronic bacterial prostatitis with corpora amyloacea

A. Piddubnyi*, R. Moskalenko, A. Romaniuk, I.-M. Zakorko, M. Lyndin, V. Sikora

*Sumy State University, Dept. of Pathology, Ukraine

Objective: To study the expression of heat shock protein Hsp 90 in patients with chronic bacterial prostatitis (CBP) and corpora amyloacea formation.

Method: Hsp90 expression was investigated in tissue of prostate of 22 CBPs with corpora amyloacea by immunohistochemistry. Samples were fixed, embedded in paraffin and analyzed for Hsp90 accumulation using the anti-Hsp90 antibody, followed by DAB detection substrate and counterstained with Mayer's hematoxylin. Microbiological examinations were

carried out in intraoperative collection of material. The identification of accumulated bacterial cultures was carried out using conventional methods based on morphological, tinctorial, cultural, biochemical and antigenic properties.

Results: In prostates with CBP *E.coli* was defined in 63.6 % of cases, *S.aureus* and *P.vulgaris* in 9.1 % of patients, *Klebsiella* spp. in 18.2 % of samples. CBP was characterized by significant inflammatory infiltration around glands and in the stroma. Immunohistochemical examination revealed significant expression of Hsp 90 in the prostate gland epithelium. The reaction in the stroma was observed around foci of inflammation. Corpora amylacea had a rounded shape and lamellar structure, between layers of deposits of Hsp 90 was revealed. Hsp90 overexpression was found in points corpora amylacea and glandular epithelium contact.

Conclusion: Overexpression of Hsp 90 in prostate tissue with CBP and corpora amylacea indicates a participation of the heat shock proteins in the development and formation of corpora amylacea. Hsp 90 overexpression may be regarded as a prospective (potential) role in the corpora amylacea development.

PS-25-017

Sarcomatoid mucinous tubular and spindle cell carcinoma: A rare occasion

C. Ercan*, I. Isik Gönül

*Gazi University, Anatomical Pathology, Ankara, Turkey

Objective: Mucinous tubular and spindle cell carcinomas (MTSCCs) are rare renal tumours. They account for less than 0.8 % of all renal neoplasms and have strong female predominance. Here we report an unusual case of MTSCC of the kidney with sarcomatoid differentiation.

Method: Microscopy and immunohistochemical stains were applied

Results: A 51-year-old female underwent radical nephrectomy with a radiological diagnosis of renal cell carcinoma(RCC). Macroscopically, a solid mass measuring 4.4x3.4x3.8 cm was observed without an extrarenal extension. Light microscopy revealed an epithelial tumour which consists of cords and tubules of cuboidal cells within a stroma of basophilic mucin with a spindle cell component. In addition to classical low grade areas, tumour has sarcomatoid areas characterized by the presence of large pleomorphic cells with high-grade nuclei and geographic necrosis. Immunohistochemistry for AMACR, PAX8, vimentin revealed positivity. Carbonic anhydrase IX was negative. Six months following surgery, patient is well without any problem.

Conclusion: MTSCC has been recognized as a distinct neoplastic entity. Since it usually shows an indolent behavior, it must be differentiated from more aggressive types of RCCs. Sarcomatoid differentiation is rare for this type of RCC and the prognosis is usually poor. Pathologists should be aware of the histologic spectrum of MTSCCs to ensure accurate diagnosis.

PS-25-018

Incidentally diagnosed cancer in patients undergoing benign prostatic hyperplasia related surgery - a tertiary unit experience

S. Komina*, V. Janevska, G. Petrusevska, S. Stavridis, S. Saidi, O. Stankov, V. Stojmenovska

*Medical Faculty, Institute of Pathology, Skopje, F.Y. Republic of Macedonia

Objective: Benign prostatic hyperplasia (BPH) is one of the most common male disorder in elderly population. The aim of this study is to share our experience related to the frequency of incidentally found carcinoma in patients who underwent benign prostatic hyperplasia-related surgery at the University Clinic of Urology in Skopje, R. Macedonia.

Method: Records from 1146 patients who underwent BPH-related surgery were retrieved between January 2009 and November 2016. In

patients with endoscopic suspicion for bladder cancer, additional transurethral resection of bladder tumour procedure was performed. The parameters analyzed encompassed patient's age, weight of resected tissue, Gleason score (GS), pathological stage and treatment modalities. Pathological GS groups were classified into those with a GS of ≤ 6 , 7 and ≥ 8 . Bladder cancer groups were classified either muscle non-invasive or muscle-invasive. Eventual cause of death was classified as cancer-specific or cancer-nonspecific.

Results: Results The present study identified 1146 patients. A total of 49 patients (4,28 %) were diagnosed with cancer (3,05 % prostate cancer, i.e. 1,22 % bladder cancer). Of these, 37 patients underwent transurethral resection of the prostate, open prostatectomy was done in 10 patients, whereas simultaneous open prostate enucleation and transurethral resection of bladder tumour was performed in 2 patients. The mean weight of TUR chips resected was 6,27 g. The mean prostate enucleation weight was 59,67 g.

Conclusion: Our series demonstrate that 4,28 % of patients were found to have cancer, of these 1,83 % required additional hormonal or operative treatment. We emphasize the need of consistent communication between pathologists and urologists, for sharing the clinico-pathologic background.

PS-25-019

Oncocytic ductal prostate carcinoma with bizarre nuclei: A rare case

R. B. Girgin*, G. Kir

*Istanbul Medeniyet University, Goztepe Hospital, Pathology, Turkey

Objective: Ductal adenocarcinoma accounts for 3.2 % of all prostate cancers. This cancer may exhibit several histological variations which are important to recognize to avoid misdiagnosis.

Method: A 69 year-old male patient presented with lower urinary tract symptoms. His prostate specific antigen blood level was 72 ng/mL. A ten-quadrant transrectal ultrasonography-guided prostate needle biopsy was performed. It was diagnosed as Gleason score 4 + 5 prostatic acinar adenocarcinoma. Then, the patient has undergone radical prostatectomy.

Results: Microscopic examination reveals acinar adenocarcinoma with Gleason score of 4 + 4 with a diffuse component of infiltrating ductal adenocarcinoma with extensive areas of mucin. Remarkable oncocytic cells with bizarre nuclei and pleomorphic multinucleated giant cells were present in ductal adenocarcinoma component.

Conclusion: Recognizing of multi faces of prostatic ductal carcinoma is very important for prognosis and follow-up.

PS-25-020

A rare primary tumour of the urinary bladder: Case report

O.-M. Andreoiu*, M. Hortopan, M. Mihai, M. Chirita, V. Herlea, G. Glück, A. Procop, C. Vasile

*Emergency University Hospital, Dept. of Pathology, Bucharest, Romania

Objective: Neuroendocrine tumours represent a small percentage of urinary bladder tumours, and are linked to molecular alterations and aberrant gene expressions.

Method: We present the case of a 46-year-old female with no clinical accusations and incidental ultrasonographic findings on routine examination. Ultrasonography revealed an ovoid, well-circumscribed sessile mass (≈ 1.5 cm diameter) of the bladder dome with endoluminal protrusion, confirmed by cystoscopy. Partial cystectomy was done.

Results: On the surgical specimen, the tumour was well circumscribed, displaying a whitish-tan cut surface. On microscopy, the tumour has a mass effect on the overlying bladder mucosa with reactive-regenerative changes and focal erosions, consisting of epithelioid polygonal cells, with centrally located nuclei, a nesting growth pattern with pushing borders