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Background & objectives: Renal carcinoma with angioleiomyoma-like stroma represents one of the emerging/provisional entities in the 2016 WHO classification. The following case helps review, discuss and provides further insight into the diagnosis of this type of cancer.

Methods: A 77-year old lady, with a history of total left nephrectomy due to an angiomyolipoma, presented a solid tumour on her right kidney. The sample of the partial right nephrectomy, measuring 5.5 x 4.7 x 2.7 cm, showed a well-defined neoplastic lesion, with a white-reddish, heterogeneous coloration, measuring 3.5 x 3.4 x 2.7 cm.

Results: Histologically it's constituted by atypical glandular structures immersed in a muscular-like stroma, accompanied by thick-walled vessels. Neoplastic epithelial cell cytoplasm was abundant, varying from light to pale, microvacuolated or eosinophilic. Immunohistochemical markers CK7, CK34βE-12 and vimentin were intensely and diffusely positive in the epithelium, with focal CD10+, demonstrating muscle differentiation in the stroma (actins HHF-35 and 1A4, caldesmon, desmine were positive), while HMB45 and Melan-A were negative. These types of tumours may be variants of clear cell carcinomas, or papillary clear cell renal cell carcinomas, but they may also represent a specific sub-group. Although their low malignant potential, when associated with tuberos sclerosus, they may present with affected lymph nodes.

Conclusion: The few cases reported, have not demonstrated the characteristic chromosome abnormalities such as (3p) deletion, (7) or (17) trisomies, therefore the relationship with the morphological spectrum of renal carcinoma with mutated TCEB1 cannot be established. Data is still limited.

E-PS-27-071

Divergent differentiation in invasive urothelial carcinoma - frequency in current practice and association with muscle invasive disease

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Background & objectives: Invasive urothelial carcinoma commonly shows divergent differentiation. Some of them may be clinically relevant. We evaluated the frequency of muscle invasive bladder cancer in our experience and its association with variant morphology.

Methods: All consecutive cases of invasive urothelial carcinoma from Imagepat Laboratory (Salvador, Bahia, Brazil) were included. All cases from January 2017 to October 2019 were reviewed. Overall, 45 cases had no divergent differentiation while 46 showed some form of variant morphology.

Results: The most common divergent differentiation was squamous which was present in 18/46 cases (39%) ranging from 5-95% of tumour area. The second most common was micropapillary – seen in 13/46 (28%), (range:<5-80%). Third, plasmacytoid was observed in 9/46 (20%) (range: 30-90%). These were followed by poorly differentiated 8/46 (17%) (range: 20-100%), glandular 5/46 (11%) (range: 10-50%), giant cell 3/46 (7%) (range: 30-100%), and sarcomatoid 2/46 (4%) (range: 30-90%). The frequency of muscularis propria invasion was 18/36 (50%) in patients with urothelial carcinoma with no divergent differentiation. This rate was lower than the rate seen in patients harbouring urothelial carcinomas with squamous component 12/14 (86%).

Conclusion: The rate of muscle invasive carcinoma did not differ between tumours without divergent differentiation and those with micropapillary, plasmacytoid and poorly differentiated morphology. Although common, squamous differentiation should be still recognized as a feature of aggressive disease.

E-PS-27-072

Effect of heavy metals on microstructural and microelemental changes in the rats urinary bladder

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Background & objectives: Global environmental pollution leads to the distribution of heavy metal salts (HMS) in the ecosystem and their impact on the organism.

To study the influence of the heavy metals (HM) accumulation on the ultrastructural changes in rat's urinary bladder (UB).

Methods: The rats were randomly divided into three groups: I–control, II – rats received a mixture of HMS (Zn, Cu, Fe, Mn, Pb, Cr) for 30 days, III – animals received HMS during 90 days. The UB structure and tissue chemical composition were studied using Scanning-electron microscopy with elemental analysis and atomic absorption spectrometer.

Results: The dystrophic, destructive, inflammatory and atrophic changes were founded in the UB wall during the experiment. The indicators of HMS accumulation were significantly ($p<0.01$) higher in several times on the 30th and 90th days (Zn–1.24/1.35, Cu–1.46/1.73, Fe–1.72/2.08, Mn–1.33/1.58, Pb–1.63/1.95, Cr–1.44/1.64) compared to control. Furthermore, the local accumulation of inorganic ions occurred in stromal and parenchymal components (their predominance in subepithelial and perivascular areas).

Conclusion: The long-term HMS intake has a negative influence on the UB (urothelium disorders (desquamation, epithelium thinning, nuclei architectonics changes, cytoplasmic contours loss); swelling of parenchymal and stromal components; disorganization and thickening of collagen, elastic and muscle fibres) which accompanied by increasing their concentration levels in the tissue. The study prolongation leads to decreasing accumulation intensity and compensatory mechanisms activation.

E-PS-27-073

Isolated granulomatous vasculitis of the epididymis

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Background & objectives: Testicular vasculitis is defined as inflammation and destruction of the blood vessels in the testis, which can be seen in either systemic or isolated diseases. Most commonly affected sites are a single testicle, followed by the epididymis and spermatic cord.

Methods: We report the case of a 66-year-old male presenting with pain in the left groin, extending to the upper scrotum and exacerbated with movement and coughing. Ultrasound examination revealed an abnormal mass in the left inguinal canal, interpreted as incarcerated inguinal hernia. Upon surgical exploration, the epididymis and tunica vaginalis appeared thickened and firm. A left orchiectomy was performed.

Results: Macroscopically, tunica vaginalis of the left orchiectomy specimen was tan-brown and diffusely thickened, as well as the epididymis. The spermatic cord appeared grossly normal. Histological studies showed the presence of multiple foci of granulomatous vasculitis, affecting medium-sized and small-sized arteries of the testicle, epididymis and tunica vaginalis, with fibrinoid necrosis and surrounding mixed inflammation including macrophages, small lymphocytes, plasma cells. Testicular parenchyma showed no histological alteration.

Conclusion: Testicular vasculitis is a rare entity, which can be easily overlooked. There is no consensus regarding the treatment of testicular vasculitis, although it is postulated that the excision of the affected organ is curative.