PARAGANGLIOMA OF URINARY BLADDER: A CHALLENGING DIAGNOSIS IN TRANSURETHRAL RESECTION SPECIMENS.

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PARAGANGLIOMA OF URINARY BLADDER:

- is a rare neoplasm accounting for less than 0.05% of all bladder tumors that originates from chromaffin tissue of the sympathetic nervous system in the urinary bladder wall.
- It may be non-functional or functional, i.e., secrete catecholamine causing paroxysmal hypertension, palpitation, and micturition syncope.
- The main diagnostic pitfall is to confound paraganglioma with an advanced urothelial cancer, especially in transurethral resection specimens, where fragmentation, artifactual changes induced by the procedure, detection of a neoplasm invading muscularis propria, may lead to an incorrect diagnosis.
REPORT OF A CASE

• A 65 year old woman presented for specialistic studies in order to define episodes of painless macroscopic hematuria followed by ultrasound identification of a mass protruding into the urinary bladder lumen.
• Her clinical history reported a previous left quadrantectomy for breast carcinoma followed by radio-chemotherapy, and mild hypertension farmacologically treated with good compensation.
• She never presented symptoms of iperadrenergic stimulation (headache or syncope/palpitations, vertigo, dizziness).
• Cystoscopic examination revealed a protruding mass on the left side of the bladder, with no noticeable alterations of the superficial mucosa. Transurethral resection (TUR) was performed.
• The procedure was devoid of complications and the patient was discharged after two days from intervention.
• Few specimens (six fragments) were withdrawn from the lesion and sent for histological examination.
Histological examination revealed the presence of a solid tumor organized in nests delineated by delicate fibrovascular septa.
Artifactual changes due to fragmentation, cautery alterations and absence of orientation of the specimens.
Tumor infiltrated muscle layer and part of the muscularis mucosae of the bladder.
Surface epithelium, where was present and well preserved, had normal morphology.
Immunohistochemistry

Ck AE1-AE3

Cromogranine A

NSE

Ck MNF-116
Immunohistochemistry-2

PGP9.5

EMA

pS100
Sequently the patient underwent to partial cystectomy, where histological diagnosis was confirmed.
• Histological aspects observed on surgical specimen suggested a benign biological behaviour, further confirmed by clinical follow up.
• In case of no symptoms that may suggest a catecolamine secretion, it can be difficult to distinguish this tumor on TUR specimens, because the presence of artifactual changes simulates a malignant highly invasive neoplasm.
• Moreover, the scarce material obtained on TUR in our case implied a more difficult evaluation.
• Only careful examination of the histological aspects can lead to elicit immunohistochemical testings that are fundamental for the final diagnosis, with important implications for the patient’s quality of life.
• The distinction of paragangliomas from urothelial carcinoma is critical because partial cystectomy with complete tumor removal usually suffices for paraganglioma.

