PATHOLOGIC DIAGNOSIS: SOLITARY FIBROUS TUMOR OF THE PROSTATE GLAND.

DISCUSSION::

Solitary fibrous tumors (SFTs) are distinctive mesenchymal neoplasm that may arise from any anatomic location with no gender predilection. Most common sites of origin are pleura (accounts for two third of all the cases) and soft tissue; however, it has been reported at various extra pleural visceral locations such as upper respiratory tract, lung, soft tissue, paranasal sinuses, nasal cavity, orbit, mediastinum, breast, liver, meninges, retroperitoneum, urogenital organs etc. Prostatic SFTs are extremely rare, and around 25 such cases have been reported in the literature to date. Mesenchymal neoplasms account for <1% of tumors occurring in the prostate gland. Most important histomorphological differentials of SFT in the prostatic needle biopsies includes stromal proliferations or neoplasms (STUMP and stromal sarcoma, PSS), sarcomatoid carcinoma, gastrointestinal stromal tumors, schwannomas, rhabdomyosarcomas, inflammatory myofibroblastic sarcoma, and mixed epithelial stromal tumors of the seminal vesicle. An immunohistochemical panel comprised of CD34, CD99, SMA, Desmin, myogenin, c-kit, ALK-1, and STAT6 is extremely useful to differentiate between these mimics. Conventionally, SFTs show immunopositivity for CD34, CD99, BCL2, EMA, and STAT6. CD34 expression has been noted in other soft tissue neoplasms for e.g., PSS and GIST. CD34 expression is absent in approximately 5%-10% conventional SFTs and in majority of malignant and dedifferentiated forms. The strong expression of STAT6 has emerged as a sensitive and specific marker which identifies the NAB2-STAT6 gene fusion product that is characteristic for SFTs and is the result of paracentric inversion involving chromosome 12q. A risk stratification scheme for non-meningeal SFT's that includes patient's age, tumor size and mitotic activity to predict the risk of metastasis has been reported with the proposal to incorporate tumor necrosis as fourth variable to improve the risk score. Treatment of prostate SFT is complete surgical excision with negative margins. SFTS are relatively insensitive to chemotherapy and radiotherapy. The clinical outcome SFT is usually favorable but postoperative long-term follow-up for tumor relapse and possible malignant transformation is important.