

Cytology of Adenomatoid Tumour of Epididymis

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Dear Sir

Adenomatoid tumour is a benign tumour of male and female genital tract with epididymis being the most common site in males. Fine needle aspiration cytology (FNAC) has an important role to play in the diagnosis of this tumour and pathologists should be aware of its cytological features so as to differentiate it from other paratesticular lesions.

An 18 year old male presented with a painless left epididymal swelling for 3 months. There was no history of trauma. Local examination revealed a firm, mobile, mildly tender swelling measuring 2x1.5 cm in the left epididymis. Bilateral testes were normal. Clinically a diagnosis of tubercular epididymitis was made. Routine hematological and biochemical parameters were within normal limits. Ultrasonography revealed a well defined hypoechoic lesion measuring 1.9x1.4 cm with increased flow on colour doppler. FNAC was performed using 23 gauge needle and a blood mixed whitish aspirate was yielded. Smears were stained with May Grunwald Giemsa (MGG). Cytologic examination showed cellular smears with cells arranged in flat sheets, cords and vague glandular structures. Cells were round to oval with eccentric nuclei, pale chromatin, distinct nucleoli and moderate to abundant amount of cytoplasm. Cytologic diagnosis suggestive of adenomatoid tumour was given and histopathology was advised. The patient underwent a conservative testis sparing surgery with the excision of epididymal swelling. Grossly, the swelling measured 1.8x1.3 cm. Consistency was firm and cut surface was grey white. Histopathologic sections revealed cords and tubules of cells with a prominent intervening fibrous stroma. Individual cells were flattened to cuboidal with vesicular nuclei, small nucleoli and abundant amount of eosinophilic cytoplasm. A final diagnosis of adenomatoid tumour was made.

Adenomatoid tumours are the most common tumours of male paratesticular tissues (epididymis, tunica or spermatic cord). In females it is seen in uterus, fallopian tube, ovary and paraovarian tissues.^[1] They present mostly as slow growing, small, firm, asymptomatic intrascrotal lump peaking in third to fifth decade of life.^[1] The histogenesis has been argued for years, the proposed cells of origin being mesothelial, mesonephric, mullerian

and endothelial. However, immunohistochemical and ultrastructural evidence supports a mesothelial origin.^[2,3] Cytological features of adenomatoid tumour have been described very briefly in literature. There are only few case reports of adenomatoid tumour of epididymis being diagnosed on cytology.^[1,4,5] Initial cytological description of adenomatoid tumour was described by Perez-Guillemro *et al.*^[1] Cytological differential diagnosis of this tumour include the reactive mesothelial hyperplasia, papillary cystadenoma, malignant mesothelioma, and adenocarcinoma.^[4] Reactive mesothelial cells with hyperplasia can be seen in hydrocoele fluid. They may not have definite arrangement of cells as seen in adenomatoid tumors. Cytologically papillary cystadenoma comprises of papillary structures composed of benign isolated cells with cytoplasmic vacuoles in a mucoid background. Malignant mesothelioma shows cells lying diffusely with cells having dense cytoplasm with nuclear enlargement and multinucleation. Metastatic adenocarcinoma show cytological features of malignancy and cells are positive for mucicarmine. Spermatic granuloma, tuberculous and chronic epididymitis are clinical differential diagnosis and can be ruled out by microscopy.^[4] Spermatic granulomas have spermiphages in a dirty background, whereas tuberculous epididymitis consists of epithelioid granulomas and Langhan's type giant cells in a background of caseous necrosis which can be confirmed by Zeihl Neelsen's stain and culture. Chronic epididymitis shows a chronic inflammatory cell infiltrate. On histopathology, this tumour shows solid to cystic tubules and cords of vacuolated cells. The cells lining the tubules vary from flattened to cuboidal, usually with a prominent intervening fibrous stroma. Cells have vesicular nuclei, small nucleoli and abundant amount of eosinophilic cytoplasm. Immunohistochemical studies show positivity for CK, EMA and calretinin but negativity for endothelial markers, supporting mesothelial derivation,^[2] as do ultrastructural studies.^[3]

The presentation of adenomatoid tumour is unique and easily recognized by FNAC. The preoperative cytology may be used as an important diagnostic tool to evaluate the paratesticular masses. Pathologist should be aware of cytological features of this tumour so as to avoid aggressive surgical procedures.

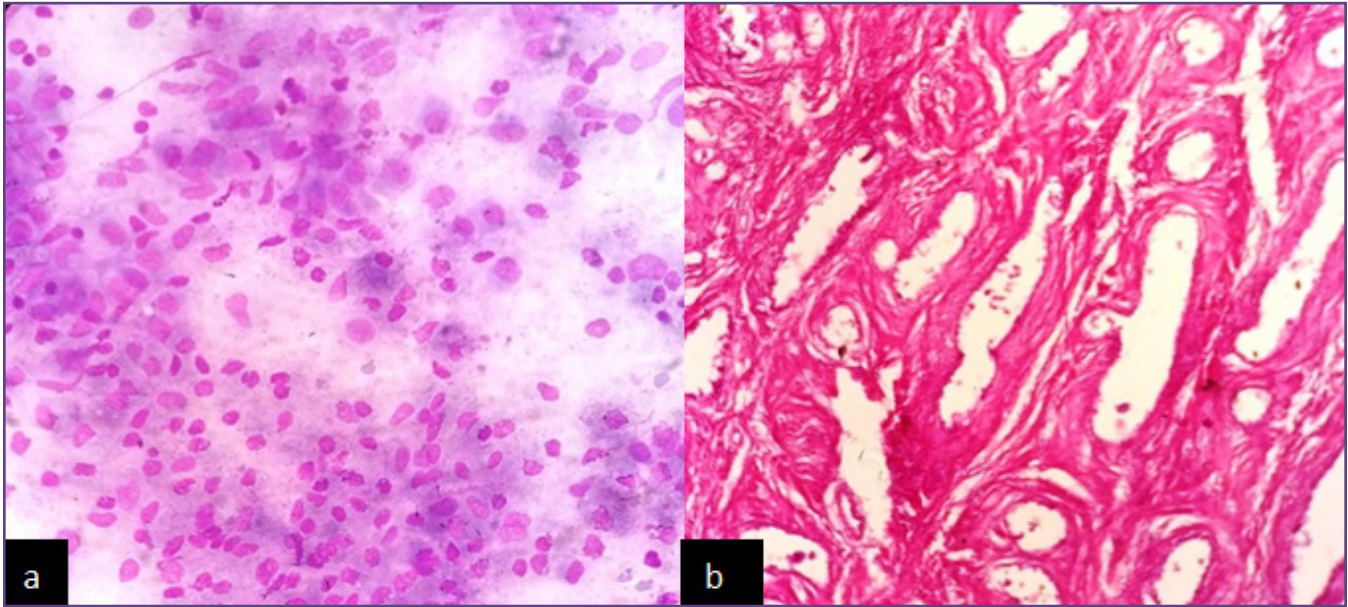


Fig. 1: (a) Cytologic smear from the swelling showing clusters of cells with round to oval eccentric nuclei and moderate to abundant amount of cytoplasm(MGG, X400), (b) Histologic section showing dilated tubular structures lined by flattened to cuboidal cells with intervening dense fibrous stroma(H&E, X100).

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