

Adenomatoid tumour of the epididymis in a torsion testis: a histopathological surprise!

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Abstract

Testicular or paratesticular adenomatoid tumours are benign swellings of the human genital tract. Although benign, they prove a challenge to diagnose clinically, and thereafter treat appropriately. Often, an adenomatoid tumour can be mistaken for a testicular malignancy, causing a patient to undergo an orchidectomy. When symptomatic and diagnosed preoperatively, a testis sparing surgery can be performed in these patients. We report a patient who underwent an orchidectomy for torsion testis, and incidentally was found to have an adenomatoid tumour of epididymis. Though this patient had dull aching pain of the left testis for a significant time, he failed to seek medical help, which if he had done, would have helped him to save his testis! A detailed literature review has been done.

Key words

Torsion, testis, orchidectomy, adenomatoid, tumour, epididymis.

Introduction

Adenomatoid tumours are benign neoplasms which occur in both sexes. Common locations are paratesticular parenchyma in males, and uterus and fallopian tubes in females. They are the most common paratesticular tumours, accounting for 30% of all paratesticular masses.¹ Epididymis is the most frequently involved site. It usually presents in males in the third or fourth decade, as a non-tender paratesticular swelling. Due to its rarity, it is often misdiagnosed, and leads to unnecessary orchidectomy.² Physical examination and sonographic features may be helpful in distinguishing an adenomatoid tumour from a malignant tumour of the testis. A preoperative diagnosis aids in organ preservation, as the adenomatoid tumour can be managed by a surgical excision without orchidectomy.³ This seems to be the first ever case where in an incidental adenomatoid tumour has been reported in a patient who underwent orchidectomy for torsion testis.

Case history

A 36-year-old male presented to the emergency triage with sudden pain and swelling of the left side of the scrotum of 10 hours duration, for which he was seen at a local hospital and was prescribed analgesics, with no pain relief. There was no history of trauma, fever, dysuria or perurethral discharge. On general examination, he was in severe pain, febrile and had tachycardia (120 beats/min). Local examination revealed an enlarged left side of scrotum, tender testis, minimal hydrocele with no transillumination. Left sided cord structures were tender and thickened. Also, there was a 4x3 cm firm swelling on the epididymis. A clinical diagnosis of torsion testis was made. Blood investigations revealed neutrophilia. Scrotal doppler was performed and revealed total cut-off of blood

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Case Report

supply with non-viability and suspected gangrene of left testis with no presence of any tumor. At surgery, the left testis was gangrenous with a firm epididymal lump (Figure 1). He underwent left orchidectomy and right orchiopexy. The postoperative period was uneventful and he made a good recovery. The final histopathology was reported to be testicular gangrene with adenomatoid tumour of the epididymis (Figure 2). Patient has been kept under follow-up and at the end of 6 months, is doing well.

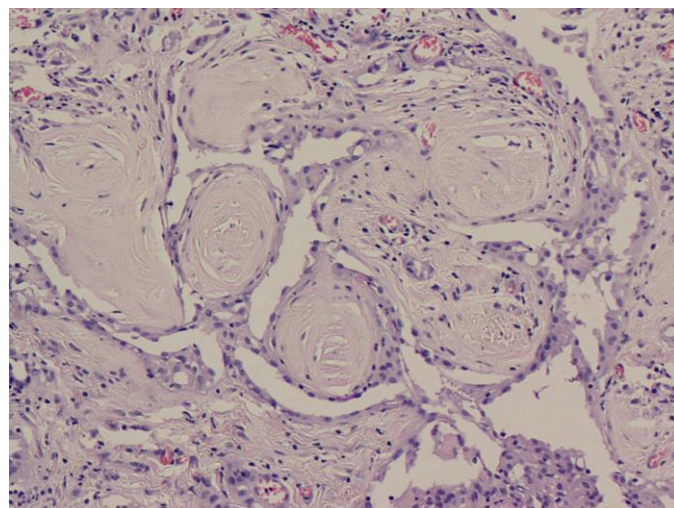
Figure 1: Orchidectomy specimen with epididymal mass.



Discussion

Golden and Ash, in 1945, published a study of 15 cases of a tumour of male and female genital tract and proposed the term 'adenomatoid tumour' because of its epithelial nature and gland like spaces seen on histology. They confirmed the benign nature of the tumour based on its low mitotic activity, absence of local tissue invasion and metastasis.⁴ Though it was a significant contribution in the understanding of the nature and development of this tumour, they could not comment on its cell of origin. Delahunt et al investigated the histological origin of paratesticular adenomatoid tumour by using immunohistochemical (IHC) markers that included IHC staining of sections of 12 cases and concluded that the tumour originated from mesothelial cells.⁵

Figure 2: Photomicrograph showing a tumour composed of cells ranging from flattened to cuboidal epithelial like appearance with moderate to abundant eosinophilic cytoplasm, few cells showing vacuolation, lining numerous channels simulating vascular spaces along with intervening collagen fibers, proliferating congested capillaries and infiltrating lymphocytes (H&E, X400).



Most adenomatoid tumours involve paratesticular tissue, although extragenital tumours have also been reported.⁶ The first case of intratesticular adenomatoid tumour was documented by Horstman et al.⁷ Since then, many cases of adenomatoid tumour of testis have been reported.⁸⁻¹⁰ These tumors typically occur in the third till fifth decade, but can also present as early as the first year of life.¹⁰ They are usually small, firm and asymptomatic mass, which most often confine to the lower pole of the testis. In spite of the benign nature of these tumours, they are often subjected to radical organ resection surgery. This occurs due to uncertain preoperative diagnosis.³

Ultrasonography (USG) is the standard imaging modality used for assessing testicular tumours. Kassis retrospectively analysed ultrasound findings of 22 patients with testicular tumours that included 6 patients with adenomatoid tumours and concluded that isoechoic nodules are unlikely to be malignant. However, hypo or hyperechoic lesions can be either benign or malignant. They advocated that in such conditions it is prudent to opt for an inguinal approach to perform biopsy and frozen section, before executing radical orchidectomy.¹¹ Other studies have also found that USG cannot accurately differentiate all benign lesions from malignant tumours, hence, an inguinal approach and

histological diagnosis is preferable before performing an orchidectomy.⁹ A fine needle aspiration cytology (FNAC) can assist in preoperative diagnosis of the tumour but a confirmed diagnosis can only be made after histopathological examination of the excised tumour.⁸

Surgical excision of the tumour is the treatment of choice, and an organ sparing surgery can be performed without a risk of recurrence.¹⁰ In cases of adenomatoid tumour of tunica albuginea, radical orchidectomy has been performed in the past due to doubtful preoperative diagnosis.⁶ However, recent trend has been towards local excision and frozen section biopsy in order to preserve fertility.⁹ A detailed literature search has not revealed any recurrences so far in operated patients.

Albeit the diagnosis of an adenomatoid tumour is benign and treatment being simple, the possibility of undertreating a testicular malignancy is the real concern. The vice versa is also true, that the worry of a testicular malignancy causes us to over treat a benign condition. Even though there is abundant literature about this neoplasm, a definitive diagnostic modality is yet to be determined. If diagnosed early, a testis sparing surgery can be offered to the patient.

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