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Case report

AN UNUSUAL FINDING OF EPIDIDYMAL SPERM GRANULOMA IN AN ORCHIDECTOMY SPECIMEN: A CASE REPORT

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ABSTRACT

Epididymal sperm granuloma as a cause of granulomatous epididymitis is rare. Most of the cases are found post vasectomy as part of the late vasectomy syndrome. These lesions are known to mimic other conditions including testicular malignancies. We report this interesting case of an epididymal sperm granuloma which was not only an incidental finding in an orchidectomy specimen of a 55 year old male with no antecedent history of surgery, trauma or clinical infection but also mimicked a testicular tumor.

Keywords Epididymitis, Sperm granuloma,Vasectomy

INTRODUCTION

Epididymitis is defined as the inflammatory condition of the epididymis. It may be acute or chronic depending on the inciting agent as well as the duration. Specific causes of chronic epididymitis include a) Tuberculosis b) Leprosy c) sarcoidosis and d) Sperm granuloma [1] .

Sperm granuloma is an exuberant foreign body reaction to extravasated sperm and occurs in 42% of patients after vasectomy [2] and 2.5% of routine autopsies [1] .This lesion is thought to result from damage to the epithelium and basement membrane of epididymal ducts by inflammation or trauma [3] with subsequent spillage of sperm into interstitium. The granulomatous reaction is probably induced by an acid fast fraction of lipid from the sperm; a hypothesis supported by the fact that this material has been found to provoke a granulomatous reaction when injected subcutaneously in hamsters [4]. Epididymal sperm granuloma may account for 'late vasectomy syndrome' in which patients complain of pain many months or years after vasectomy. Ligation vasectomy accounts for most cases whereas cauterization vasectomy rarely results in granuloma [1].

CASE REPORT

55 year old male reported with h/o pain abdomen since 10 days with inguinoscrotal swelling on left side since 1 month. He also complained of pain in the scrotal region on and off since 10 days. No other positive history or co morbidities noted. On examination vitals were normal and a left direct inguinal hernia with scrotal swelling measuring

2x1 cm was felt. On ultra sound the inguinal hernia was confirmed and the scrotal swelling was hypoechoic with calcification of testis. With a suspicion of carcinoma testis (L) meshplasty with (L) orchidectomy was planned.

For histopathological examination we received an orchidectomy specimen measuring 6x4x3cm with spermatic cord measuring 9cm. A nodule measuring 2 cmx1cm was felt in the epididymal area. On microscopic examination testicular tubules with both normal and arrested spermatogenesis were seen. The epididymal tubules showed extravasated sperms along with a granulomatous reaction composed of lymphocytes, lipid laden and sperm laden macrophages (Spermiophages). Some of the epididymal tubules showed haemorrhage, necrosis and cholesterol clefts. Focal areas of calcification were also seen. A diagnosis of Epididymal Sperm granuloma was given.

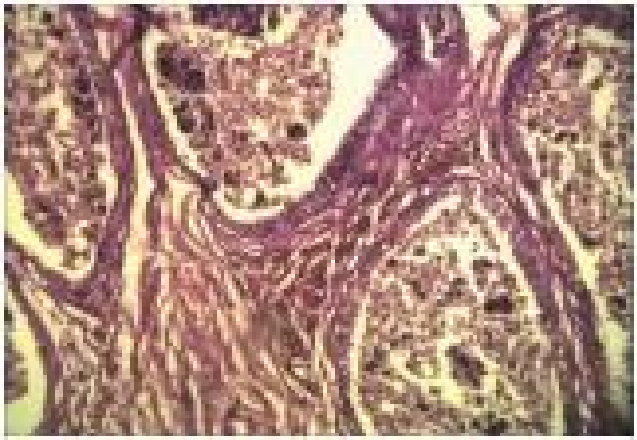

Fig 1: Focal areas of calcification. H & E 10x

Fig 2: Sperm granuloma H & E 40x

Fig 3: Sperm granuloma with spermiophages. H & E 40x

DISCUSSION

Sperm granuloma was first described by Grunberg in 1926 [5]. They have been reported in upto 42% of men who have undergone vasectomy and 2.5% of general population [1]. They can range in size from microscopic upto 4cm but most are less than 1 cm [1]. Although most sperm granulomas are asymptomatic, some manifest as painful nodules. They are generally well defined, hypoechoic, solid masses at ultra sonography. On histopathology foreign body granulomas may be present with necrosis and later progressive fibrosis. Extravasated sperms are plenty with many engulfed by macrophages (referred to as spermiophages).Yellow brown ceroid pigment; a lipid degradation product of sperm may persist. Vasitis nodosa occurs in about one third of cases of sperm granuloma [1].Although they can occur anywhere in the ductal system, they are most common at the cut ends of the vas deferens and can be multiple [6]. It is also known to occur in the epididymis. However the incidence in the testis is exceptional. It is probably the microenvironment of the testicular interstitium rather than the extravasated components from the ruptured seminiferous tubules, which is the main factor determining the limited formation of spermatic granuloma in the testis [7].The incidence of sperm granuloma in our knowledge is limited. In his study of 228 cases of epididymal nodule in india Gupta et al found an incidence of 5.3% [8].In another study by Shah et

al the incidence was found to be 7.5%[9]. Commonest cause of these granulomas is thought to be vasectomy. However, trauma , epididymitis and orchitis have also been described [1, 8]. Silch et al describes sperm granuloma in a patient 4 years after inguinal hernia repair [10] and Deane et al describes sperm granuloma presenting as a recurrent inguinal hernia[11]. However as in our patient, case reports without any antecedent history of surgery trauma or clinical infection have been seen [3, 8]. Another important feature is the rare confusion it can cause with testicular tumor [12, 13]. As seen in our case the testicular tumor is thought of because of proximity to the testes, solid nature and calcification.

CONCLUSION

We present this rare case of sperm granuloma which was an incidental finding with no antecedent history of vasectomy, trauma or clinical infection and mimicked a testicular tumor. The patient also had a concurrent direct inguinal hernia on the same side. The possible etiology of sperm granuloma in our patient may be an unnoticed trauma or subclinical epididymal infection.

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