



SPERMATOCELE AN INCIDENTALOMA : A CASE REPORT

General Surgery

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ABSTRACT

Spermatoceles are asymptomatic scrotal swellings found incidentally during physical and radiological examination. It is often confused with a hydrocele. A 53-year-old man came to the OPD clinic for a right scrotal swelling. The swelling first appeared following scrotal trauma and persisted for several years with a sense of heaviness, infrequent periods of right scrotal pain, and cosmetic concerns. Ultrasonography of the scrotum revealed a huge fluid cyst pushing the testis antero-inferiorly in the right scrotum. It was initially confused with a hydrocele but on radiological examination, a spermatocele was diagnosed. On scrotal exploration in the OT, a spermatocele was identified, emerging from the head of the epididymis. The cyst was excised.

KEYWORDS

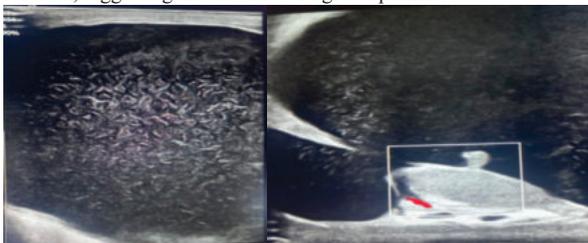
spermatocele, scrotum

INTRODUCTION:

A spermatocele is a cystic cavity filled with fluid and spermatozoa probably due to an acquired or congenital partial obstruction of the spermatic ducts.^{1,2} It is commonly unilateral, solitary, less than 1 cm in diameter, and therefore it is often asymptomatic.^{1,2} It infrequently gets big enough to bother the patient, be associated with scrotal heaviness, raise suspicions of neoplasm, or necessitate treatment.³⁻¹¹ This diagnosis of spermatocele is generally incidental as the condition is typically insidious. Surgical intervention should be considered if symptoms such as persistent disturbing pain are present or para testicular neoplasms cannot be ruled out. This case has been presented due to incidental finding and the rarity of the case.

CASE REPORT:

A 53-year-old male presented with right scrotal swelling following scrotal trauma 15 years back in his place of work. About 2 months after this incident, he noticed a painless swelling at the same site of the trauma at the right scrotum. The swelling gradually increased in size. The patient did consult a local doctor and was noncompliant with the advice. No genitourinary infection or recent scrotal trauma was associated with the newly developing swelling. The swelling increased gradually over the last 15 years and eventually outgrew its initial size. The patient infrequently complained of a dragging pain in his right scrotum, mostly at the end of the day at work. On examination, a gross elliptical swelling in the right scrotum. The swelling was superior and posterior to the right testis. On palpation, the swelling was soft, nontender, fluctuant, extended upwards, and attached to the spermatic cord. The overlying skin was free. The physical examination of his left scrotum was unremarkable. The transillumination test was positive (fig 3) indicating the cystic nature of the swelling. The results of the hematological and biochemical evaluations were unremarkable. The urine examination did not reveal any infection. The color duplex scanning of the scrotum revealed a uniloculated cystic lesion in the right scrotal sac (fig 2) showing dense mobile internal echoes within which appear to be moving in the direction opposite to the dopplerprobe on compression - falling snow sign (fig 1). The mass was overriding and pushing the testis inferiorly to the bottom of the scrotum, suggesting the existence of a gross spermatocele.



(Fig 1) Falling Snow Sign
On USG

(Fig 2) a grey scale image
of right scrotal sac showing
a giant cyst positioned
superior to right testis s/o a
spermatocele



(Fig 3)
TRANSILLUMINATION +

(Fig 4) INTRA OP IMAGE
SHOWING
SPERMATOCELE The
spermatocele pushing the
testis laterally and anteriorly
but not enveloping it as in
the case of hydrocele and
the tunical covering of the
testis was maintained .

Both testicular volumes were normal and the testes showed diffuse homogenous parenchymal echo patterns. There were no focal lesions or calcification in the testes, which indicated preserved parenchymal vascularity. Varicocele and hydrocele were ruled out bilaterally on colour doppler examination. Surgical exploration was expedited through a right scrotal incision parallel to the median raphe (fig 4). The cyst was dissected bluntly from the wall of the scrotum, after which it was separated gently from the spermatic cord, testis, and epididymis. During the separation, adherence was observed between the mass and the head of the epididymis. The cyst was excised and the testis was returned to the scrotum. The incision was closed in layers. The cystic fluid thus collected was examined under a light microscope and no pus cells or sperm cells were found. The postoperative course was uneventful, and the patient was discharged from the hospital.

DISCUSSION:

A spermatocele is usually referred to as a sperm-containing cyst of the scrotum.^{1,12,13} It is generally confined to the epididymal head, where it mostly originates following the dilation of the efferent ductules, although it may also commence from the expansion of tubules of the rete testis or aberrant ducts. The onset of spermatocele is usually idiopathic. However, the dilation of these tubules may develop secondary to trauma, epididymitis, or scrotal surgery.^{2,4} In the present report, a relationship between spermatocele development and scrotal trauma is seen. This agrees with Crossan² who stated that "the (scrotal) swelling or tumor is what is most complained of, and if this is a slowly progressive affair following trauma, it would cause one to be suspicious of spermatocele." Therefore, the history of trauma in the present report can aid in the possibility of the existing condition.

A giant spermatocele is a rare occurrence. 3-11 A giant spermatocele is usually single and unilocular, just like the one in the present case report. However, bilateral 5, 10 multilocular 3, 5, 6 spermatoceles have been reported in the literature. Six of the reported cases of giant spermatoceles occurred in men above 40 years 3, 5-8, 11. The remaining 3 cases involved males aged 14, 27, and 40 years. 4, 9, 10 All the reported cases seemed to be idiopathic, except for 1 case with a history of scrotal trauma, 4 like our patient. Such giant scrotal swellings as the one in this case report are frequently believed to be vaginal hydroceles. A careful diagnostic workup is essential to establish the correct diagnosis. Spermatoceles generally occur on the upper part of the testis, pushing it inferiorly and sideways. Usually, they can be felt as distinct structures. However, the hydrocele surrounds the testis on the lateral and anterior aspects without any displacement, which gives the false impression of testicular enlargement. 14 Ultrasonography can aid in differentiating one from the other. The hydrocele mostly demonstrates an echo-free cystic structure that envelops the testis 14 whereas spermatoceles might show low-level internal echoes due to the presence of plenty of sperms /other cells, which move away from the duplex probe on compression, eliciting the characteristic falling snow sign.

Spermatoceles have been managed by surgical excision, which is currently the gold standard of treatment. 13 Surgery is usually recommended when the diameter of the spermatocele reaches 4 cm and if it is associated with symptoms that cause the patient discomfort, such as cosmetic concerns or scrotal pain (as is the case in the present report) or/and there is an associated hernia or hydrocele. 3-11, 15 Surgery is also indicated if a neoplastic pathology cannot be ruled out. 16 Some cases of adenocarcinoma of rete testis may present with soft scrotal swellings, 16 which was the case in this patient. In giant spermatoceles, surgery is also advisable because the torsions of the testis 10 and the cyst itself around its pedicle 4, 9 are documented possibilities. A review of the literature revealed that the terms "epididymal cyst" and "spermatocele" have been utilized conversely or even inaccurately to describe the same pathology. 17 Such diagnostic incompetence may be related to the limited ability of clinical and sonographic examinations to differentiate between the two kinds of cysts.

CONCLUSION:

Spermatoceles might occur at a younger age and attain a giant size. Patients usually avoid treatment till they experience symptoms that cause either discomfort or cosmetic concerns. Surgery is the treatment of choice for gross cases that are likely to be complicated by testicular torsion. It is advisable to undergo a clinical and sonographic examination of the scrotum following trauma for the possible development of a spermatocele. Patient self-examination of the scrotum should be encouraged routinely, especially after genital trauma.

REFERENCES:

1. Oliva E, Young RH. Paratesticular tumor-like lesions. *Semin Diagn Pathol.* 2000;17:340-358. [PubMed] [Google Scholar]
2. Crossan ET. Spermatocele. *Ann Surg.* 1920;72:500-507. [PMC free article] [PubMed] [Google Scholar]
3. Yagi H, Igawa M, Shiina H, Shigeno K, Yoneda T, Wada Y. Multilocular spermatocele: a case report. *Int Urol Nephrol.* 2001;32:413-416. [PubMed] [Google Scholar]
4. Takimoto K, Okamoto K, Wakabayashi Y, Okada Y. Torsion of spermatocele: a rare manifestation. *Urol Int.* 2002;69:164-165. [PubMed] [Google Scholar]
5. Basar H, Baydar S, Boyunaga H, et al. Primary bilateral spermatocele. *Internet J Urol.* 2003;10:59-61. [PubMed] [Google Scholar]
6. Yeh HC, Wang CJ, Liu CC, Wu WJ, Chou YH, Huang CH. Giant spermatocele mimicking hydrocele: a case report. *Kaohsiung J Med Sci.* 2007;23:366-369. [PubMed] [Google Scholar]
7. Castellino-Prabhu S, Ali SZ. Spermiphages in a giant spermatocele. *Diagn Cytopathol.* 2010;38:816-817. [PubMed] [Google Scholar]
8. Jain N, Chauhan U, Sethi S, Goel V, Puri SK. Tubular ectasia of rete testis with spermatocele. *J Clin Diagn Res.* 2015;9:TJ03-TJ04. [PMC free article] [PubMed] [Google Scholar]
9. Ameli M, Boroumand-Noughabi S, Gholami-Mahtaj L. A 14-year-old boy with torsion of the epididymal cyst. *Case Rep Urol.* 2015;2015:731987. [PMC free article] [PubMed] [Google Scholar]
10. Ameli M, Parsapour A, Gholami-Mahtaj L. A 40-year-old man with testicular torsion and large bilateral spermatoceles. *Qatar Med J.* 2016;2016:10. [PMC free article] [PubMed] [Google Scholar]
11. Wani I. Hernia with spermatocele, cord and testis inside sac: case report. *Int J Surg Case Rep.* 2018;53:397-399. [PMC free article] [PubMed] [Google Scholar]
12. Rubenstein RA, Dogra VS, Sefel AD, Resnick MI. Benign intrascrotal lesions. *J Urol.* 2004;171:1765-1772. [PubMed] [Google Scholar]
13. Lundström KJ, Söderström L, Jernow H, Stattin P, Nordin P. Epidemiology of hydrocele and spermatocele; incidence, treatment and complications. *Scand J Urol.* 2019;53:134-138. [PubMed] [Google Scholar]
14. Srisajjakul S, Prapaisilp P, Bangchokdee S. Diagnostic clues, pitfalls, and imaging characteristics of '-celes' that arise in abdominal and pelvic structures. *Abdom Radiol.* 2020;45:3638-3652. [PubMed] [Google Scholar]
15. Shan CJ, Lucon AM, Pagani R, Srougi M. Sclerotherapy of hydroceles and

- spermatoceles with alcohol: results and effects on the semen analysis. *Int Braz J Urol.* 2011;37:307-312. [PubMed] [Google Scholar]
16. Sánchez-Chapado M, Angulo JC, Haas GP. Adenocarcinoma of the rete testis. *Urology.* 1995;46:468-475. [PubMed] [Google Scholar]
 17. O'Kelly F, McAlpine K, Abdeen N, Keays MA, Guerra LA, Leonard MP. The fertility of continued surveillance of epididymal cysts - a study of the prevalence and clinico-demographics in pre- vs. post-pubertal boys. *Can Urol Assoc J.* 2019;13:E398-E403. [PMC free article] [PubMed] [Google Scholar]