Giant Spermatocele Mimicking Hydrocele: A Case Report

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Spermatoceles are usually asymptomatic and often found incidentally during physical examination. We report a case of giant spermatocele that mimicked a hydrocele. A 55-year-old man suffered from right scrotal enlargement for several years. As the heavy sensation and scrotal soreness worsened in recent months, he came to our outpatient clinic for help. Hydrocele was suspected due to transilluminating appearance of the scrotal content. Surgical exploration was arranged and a giant spermatocele was found. Total excision of the spermatocele was performed and the patient recovered well. The specimen was sent for pathology and spermatocele with spermatozoa was noted.

Key Words: benign scrotal pathology, giant spermatocele, hydrocele
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A spermatocele is a cystic cavity filled with fluid and spermatozoa probably due to an acquired or congenital partial obstruction of the spermatic ducts. Spermatoceles are usually asymptomatic, single and small in size. Occasionally, a spermatocele may become large enough to bother the patient and to be suspected as a tumor. Surgical intervention should be considered if symptoms such as persistent disturbing pain are present or paratesticular neoplasms cannot be ruled out. Here, we describe a giant symptomatic spermatocele and review the literature.

Case Presentation

A 55-year-old man visited the urology outpatient clinic for evaluation of right scrotal swelling. Over the preceding 2 years, the swelling had gradually progressed in size and nearly occupied the entire right hemiscrotum. He complained of dragging sensation, soreness, and even sometimes stretching pain in the right inguinoscrotal area while standing or during abdominal straining. The discomfort had become more evident in the last half year. During physical examination, a huge, ovoid, soft mass was palpable without tenderness in the upper part of the right scrotal content. The mass was located superior and posterior to the testis and extended over the spermatic cord. A transillumination test was positive, suggesting a cystic component. The patient rejected further investigation including ultrasonography. There was no history of trauma, infection, or inguinoscrotal operation, including vasectomy. Complete blood count and biochemical examinations were normal.

Hydrocele was suspected based on these results, and surgical exploration was performed through a right inguinoscrotal approach. Several fluid-filled cystic masses were observed from the spermatic cord to the head of the epididymis. By blunt dissection, the cystic masses were separated gently from the cord and body

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of the epididymis (Figure 1), and then removed successfully. The plane between the masses and epididymis was clear, and the epididymis was preserved. The mass appeared to be multilocular and arose from the epididymal body. Its size was 6.5 × 3.7 × 2.0 cm. The aspirated fluid was gray-yellowish and cloudy. The testis and epididymis were replaced in the scrotum and the incision was closed layer by layer. Microscopic examination of the fluid disclosed numerous spermatozoa, most of which were immobile. Histopathologic examination of the specimen revealed multiple cystic formations with fibroconnective tissue (Figure 2). The thin cyst wall was lined with a layer of flattened cells. A spermatocele was diagnosed by the pathologic findings.

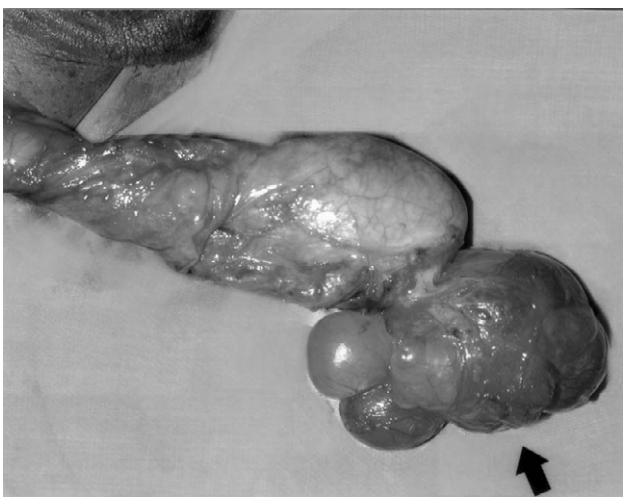

Figure 1. *The cystic mass (arrow) appears to be multilocular and arises from the epididymal body.*

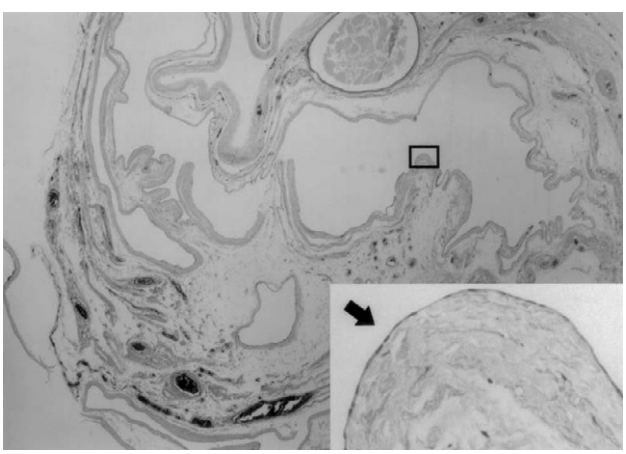

Figure 2. *Histopathologic examination of the specimen by hematoxylin & eosin stain reveals multiple cystic formations with fibroconnective tissue (original magnification, 20×). Inset (magnified region of the square, 400×): the thin cyst wall is lined with one layer of flattened cells (arrow).*

Discussion

Typically, spermatoceles are the sperm-containing cystic dilatations of the efferent ductules in the head of the epididymis. Less commonly, they are dilatations of the tubules of the rete testis or aberrant ducts [1]. Since most spermatoceles are painless and <1 cm in diameter, they tend to be overlooked [2]. However, spermatoceles can sometimes be large enough to cause discomfort when walking or when the patients cross their legs. Spermatoceles are fairly common because urologists find them by chance in about 30% of men who have ultrasonography of the testes for other reasons [3]. Spermatoceles most frequently occur in the fourth and fifth decades of life in men. This implies that an advanced age might be an important factor in the occurrence of this type of lesion [4].

The exact etiology of spermatocele remains obscure. Although spermatoceles can develop after trauma, infection, vasectomy or inguinoscrotal surgery, they also occur in men without any history of such problems. According to the hypothesis of Itoh et al [4], spermatoceles represent proximal dilation after an obstruction of the efferent ducts, possibly caused by the shedding of senile seminiferous epithelium. This shedding occurs normally throughout life, but the cells may accumulate and cause a blockage in older men, which may explain why the incidence of spermatoceles tends to increase with age.

Most spermatoceles, unlike our case, have a single simple cyst. Only four cases of huge multilocular spermatoceles have been reported in previous literature [5–8]. Because of a high association with tubular ectasia of rete testis, multilocular cysts are postulated to derive from the histologic structure of the rete testis, forming irregular anastomosing spaces arising from the tubuli recti [6].

Many urologists are confident of making a diagnosis of spermatocele based on history and physical examination alone. More commonly, ultrasound is used to confirm the diagnosis. Ultrasonography usually reveals well-defined hypoechoic lesions generally 1–2 cm in size with posterior acoustic enhancement [9]. Although ultrasonography has a high accuracy rate and is more sensitive than physical examination, Yagi et al [6]

concluded that definitive diagnosis of a multilocular spermatocele, as in this case, is still difficult.

Spermatoceles must be differentiated from hydroceles, varicoceles, epididymal cysts, infection or tumors [10]. A spermatocele often lies on the posterolateral border of the testis and does not fluctuate in size upon provocative maneuvers [8]. Urinalysis is indicated to exclude genitourinary tract infection. Demonstration of sperm in cystic fluid could distinguish it from an epididymal cyst. In addition, other uncommon conditions may be taken into consideration. Chronic epididymitis is speculated to trigger secondary neoplastic epithelial changes in rete testis adenocarcinoma, and may have similar presentation as a typical spermatocele [11]. Torsion of a spermatocele, which is rare, often causes severe scrotal pain and requires surgical intervention [12].

Most spermatoceles do not require any treatment. Those that become large, those that cause bothersome discomfort, or those that are difficult to distinguish from neoplasm can be surgically removed. Definite diagnosis of a giant multilocular spermatocele is difficult based on history and physical examination alone. In the present case, surgical exploration was recommended. In conclusion, we suggest that such a huge and symptomatic spermatocele should be excised to relieve the symptoms.

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巨大精液囊腫相似陰囊積水 — 病例報告

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精液囊腫通常是在理學檢查被意外發現，常常沒有引起症狀。我們報告一個臨床上相似陰囊積水的巨大精液囊腫。一位 55 歲男性的右側陰囊腫大已有數年，並且在最近幾個月開始有下墜及酸疼的感覺。在門診以光照檢查顯示陰囊內容物是可透光的，初步的診斷為一陰囊積水。手術探查發現一巨大的精液囊腫，我們將此精液囊腫完全切除，術後病人恢復良好。檢體送病理檢查，在精液囊腫內可見到精蟲。

關鍵詞： 良性陰囊病變，巨大精液囊腫，陰囊積水
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