Case Report

DOI: 10.7860/JCDR/2026/88625.24513

Bilateral Large Spermatocele Masquerading as a Large Hydrocele: A Case Report

Urology Section

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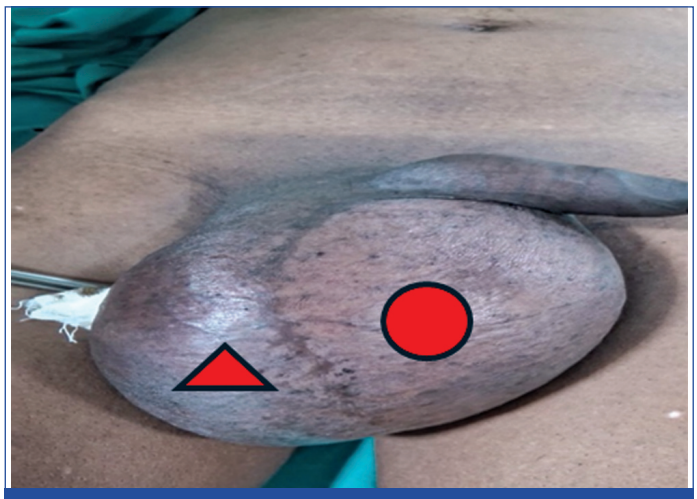
ABSTRACT

Common painless scrotal swellings in an adult male are hydrocele, hernia, tumours of the testis, varicocele, spermatocoele, and cysts of the testis and epididymis. Bilateral large spermatocoele is rare. A 61-year-old male patient presented with a painless large swelling in the scrotum, clinically suspected as a case of large hydrocele, underwent surgical exploration, with intraoperative findings suggestive of bilateral large spermatocoele. The possibility of the presence of a spermatocoele should always be kept in mind while counselling and operating on a large scrotal swelling in an adult, especially if radiological investigation is not done. Surgical excision is the best treatment for large spermatocoeles. Fluid cytology and histopathology are confirmatory in spermatocoele diagnosis.

Keywords: Cyst, Cytology, Excision, Fluid, Histopathology, Scrotum, Spermatic cyst, Swelling

CASE REPORT

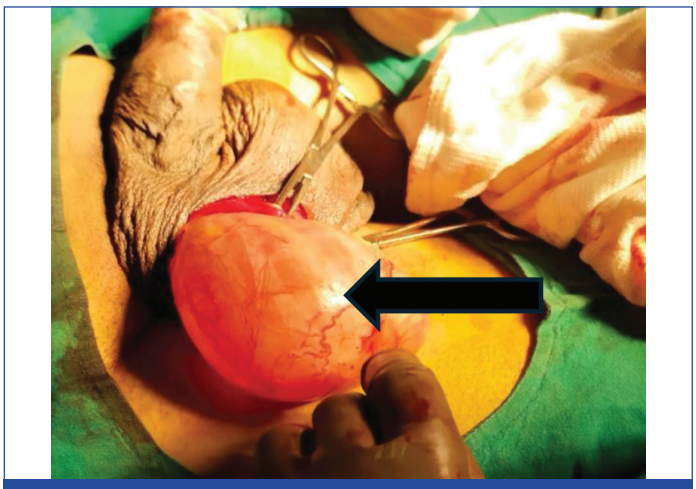
A 61-year-old male patient with a completed family visited the Urology Outpatient Department (OPD) with a complaint of painless swelling in the scrotum for seven to eight years. Delayed presentation in OPD visit was due to shyness and partially due to fear of surgical treatment. Swelling had gradually increased to present size. Swelling was huge and visible even with clothes on. On inspection, swelling was more in the right hemiscrotum. Swellings were globular in shape with normal external appearance. Right hemiscrotal swelling extended from pubic bone to distal 1/3rd of right thigh with slight deviation of penis on left-side, whereas left hemiscrotal swelling extended from pubic symphysis to mid-thigh. On palpation, swellings were soft, non tender, and transilluminant. Swellings were not reducible, and no change in size was seen with changes in posture and decubitus. There was no cough impulse on both sides of scrotal swellings. There were no signs of inguinal hernia bilaterally. Swellings were fluctuant. Swelling measured 8×8 cm in the right hemiscrotum and 5×5 cm in the left hemiscrotum [Table/Fig-1]. There was no rise in temperature in both hemiscrotums. Both testicles were not palpable separately. On auscultation, no bowel sounds were heard. The patient had known co-morbidities of diabetes mellitus and hypertension for 10 years, both of which were well controlled on medication. There was no history of scrotal trauma or any urologic surgical history. The patient was of average build with adequate nutritional status, with a Body Mass Index (BMI) of 24.2 kg/m^2. The patient was a regular tennis player.



[Table/Fig-1]: External Appearance of scrotal swelling (right hemiscrotal swelling marked by red triangle and left hemiscrotal swelling by red circle).

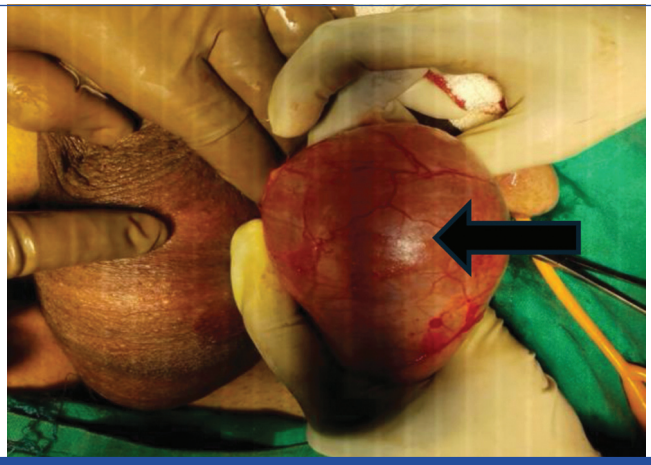
Based on the aforementioned clinical history and clinical examination, bilateral hydrocele was suspected. After adequate preoperative counselling, preoperative optimisation, and preoperative work-up for above diagnosis, the patient was planned for scrotal exploration with Jaboulay's procedure as the surgical technique under spinal anaesthesia however surgery was revised intraoperatively after identification of cystic lesions.

The scrotum was opened with a midline raphe incision. Starting from the right hemiscrotum, with fine and meticulous dissection, a cystic lesion was found measuring 8×7.5 cm [Table/Fig-2] (but right hemiscrotal swelling measured 8×8 cm, this discrepancy in measurement was due to thickened scrotal skin which was not present during cyst measurement). This cystic structure was delivered out of scrotum. After delivering this structure, the right testicle was seen at its base [Table/Fig-2]. On thorough examination and fine adhesiolysis, this cystic structure was found to be adhered to the caput of the right epididymis. Excision of the cystic structure was done with fine scissors and bipolar cautery. Due to difficulty with dissection because of the cyst's massive size, the contents were aspirated with a syringe; 60 mL of clear fluid was collected and sent for pathological examination. The excised cyst was also sent for histopathological examination. Right epididymis was not injured during this procedure. After adequate haemostasis, same procedure was repeated on left-side. On the left-side, besides a large cyst of 5×5 cm, another small cyst of 1×1 cm was also excised without aspiration [Table/Fig-3,4]. Scrotal wounds were washed with normal saline and closed in layers over corrugated

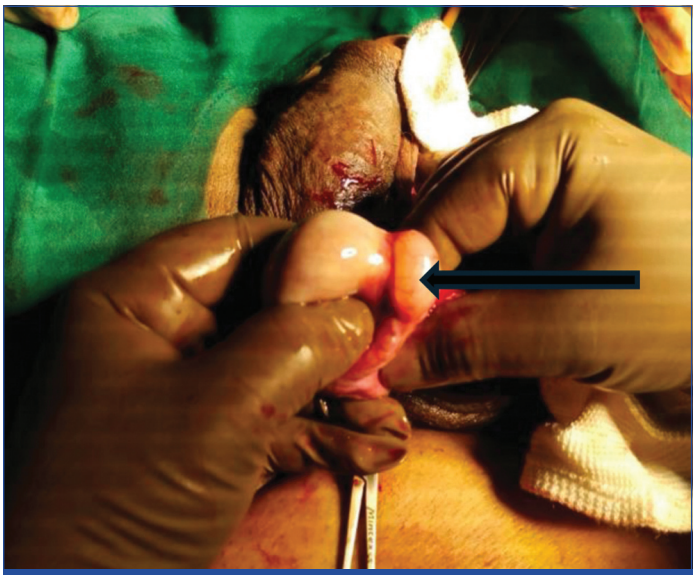


[Table/Fig-2]: Right sided Spermatocoele (marked by solid black arrow).

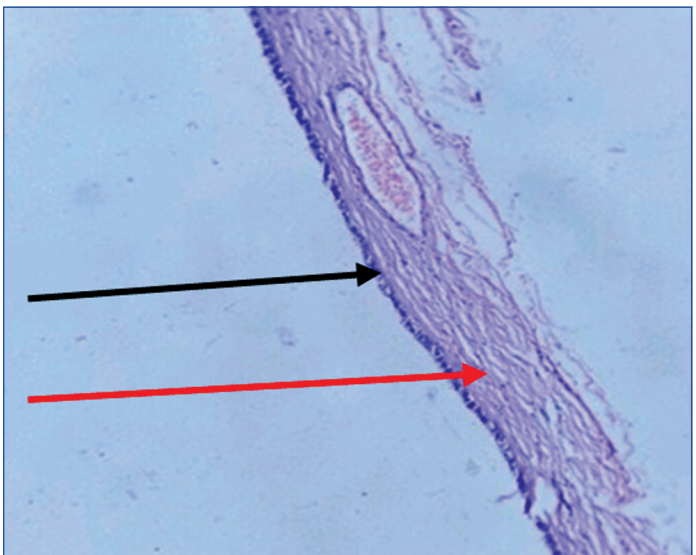
drains in both hemiscrota. The patient was discharged after drain removal on the second postoperative day. Sutures were removed on the 11th postoperative day. Histopathological examination of cyst suggested benign epididymal cyst [Table/Fig-5]. Pathological examination of cystic fluid showed sperm and epididymal cells, with a few histiocytes and mesothelial cells, suggestive of spermatocoele. The patient is doing well on regular follow-up for six months with no recurrent scrotal swelling.



[Table/Fig-3]: Left sided spermatocoele (marked by solid black arrow).



[Table/Fig-4]: Small left spermatocoele (after excision of large left spermatocoele) (marked by solid black arrow).



[Table/Fig-5]: Histopathological image of excised spermatocoele wall (black arrow showing cuboidal lining and red arrow showing fibrocollagenous and fibroadipose tissue) (H&E,10x).

DISCUSSION

Spermatocoele is a benign cystic dilatation of the epididymal ducts containing spermatozoa and fluid, typically resulting from congenital or acquired partial obstruction of the spermatic ducts [1]. It most commonly occurs in middle-aged men and usually presents as an asymptomatic, solitary, and slowly enlarging scrotal swelling [1].

Although its exact aetiology remains uncertain, factors such as trauma, infection, vasectomy, and prior inguinoscrotal surgery have been associated with its development; however, many cases occur without any identifiable predisposing factor [1].

Clinically, spermatocoele should be differentiated from other causes of scrotal masses, including hydrocele, varicocele, epididymal cysts, infections, and testicular neoplasms. Definitive differentiation from an epididymal cyst can be achieved by identifying spermatozoa within the cyst fluid, although both lesions often share similar clinical and radiological features [1].

Salama N and Hassan OS described a case of a young male with large scrotal swelling in the right hemiscrotum, with a history of scrotal trauma in childhood, which had gradually progressed to a size of 7×7 cm, which was operated on via right scrotal incision [2]. Contrary to this, the present case was an adult male in his sixties with no history of trauma to the scrotum.

Yeh HC et al., described a case of a male patient in his mid 50s with a history of right scrotal swelling, clinically suspected to be a hydrocele, operated on via a right inguino-scrotal approach, where a multilocular cystic lesion of size 6.5×3.7×2.0 cm was found intraoperatively. The aspirated cystic fluid was grey-yellowish and cloudy, and its microscopic examination revealed many spermatozoa. Histopathological examination of the cyst revealed multiple cystic formations with fibroconnective tissue with inner lining of flattened cells [1].

Bilateral spermatocoele is very rare, as shown by Basar H et al., reported a 45-year-old male with bilateral giant spermatocoeles presenting as large inguinoscrotal masses that had been present since adolescence and progressively enlarged over five years [3]. Ultrasonography revealed multiloculated cystic lesions measuring 65×45×50 mm on the right and 55×45×40 mm on the left. The patient was successfully treated with bilateral surgical excision through inguinoscrotal incisions while preserving the epididymal structures.

Weatherly D et al., discussed that male fertility can be affected either by significant obstruction by a large cyst or surgical injury to the epididymis or vas deferens [4]. Fertility assessment was not performed in the present case because the patient's family was complete. Spermatocoele can be observed if small and asymptomatic. As per the study by Lundström KJ et al., surgical excision or spermatocoelectomy is the treatment of choice if the size is large and symptomatic [5]. As the spermatocoele was large, excision was performed in the present case.

CONCLUSION(S)

Spermatocoele should be kept in the differential diagnosis of all soft, transilluminant, non reducible scrotal swellings in the absence of radiological investigation. Adequate counselling should be done, in view of change in surgical methodology, based on intraoperative findings. Fluid cytology should be done for all scrotal cystic lesions. Regular follow-up of these patients should be advised; however, in the present case, no recurrence was observed over six months of follow-up, consistent with the low recurrence rates reported in the literature.

Authors' contribution: All authors contributed to this case and writing of manuscript. All authors gave approval or drafting of this case report.

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PLAGIARISM CHECKING METHODS: [Jain H et al.]

- Plagiarism X-checker: Mar 27, 2026
- Manual Googling: Jun 20, 2026
- iThenticate Software: Jun 23, 2026 (1%)

ETYMOLOGY: Author Origin

EMENDATIONS: 6

AUTHOR DECLARATION:

- Financial or Other Competing Interests: None
- Was informed consent obtained from the subjects involved in the study? Yes
- For any images presented appropriate consent has been obtained from the subjects. Yes

Date of Submission: **Feb 27, 2026**
Date of Peer Review: **Jun 12, 2026**
Date of Acceptance: **Jun 25, 2026**
Date of Publishing: **Oct 01, 2026**