

Varicocele with Concomitant Ipsilateral Intratesticular Spermatocele: A Rarity

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Dear Sir,

A 45-year-old male presented as part of infertility evaluation with pain and heaviness in the left hemiscrotum and was identifiable by physical examination as varicocele with typical “bag of worms” appearance. The varicocele was confirmed with high-resolution color-flow Doppler ultrasound, which showed dilation of the vessels of the pampiniform plexus, typically greater than 3 mm in diameter [Figure 1]. Incidentally, a well-defined ipsilateral intratesticular cystic lesion was visualized measuring 9 mm × 10 mm with irregular walls and fine low-level internal echoes lying adjacent to the mediastinum testis [Figure 2]. The patient showed negativity for tumor markers alpha-fetoprotein, beta-human chorionic gonadotropin, and lactate dehydrogenase. Their positivity could indicate an underlying germ cell tumor of the testis. Based on the above findings, a diagnosis of left-sided varicocele with concomitant intratesticular spermatocele was made. Inguinal exploration was performed, and examination of frozen sections helped confirm that the cystic lesion was an intratesticular spermatocele with mature spermatozoa as its contents. A varicocele is abnormal dilation and enlargement of the scrotal venous pampiniform plexus which drains blood from each testicle. Varicoceles are far more common (80%–90%) on the left. If a left varicocele is identified, there is a 30%–40% probability; it is a bilateral condition.^[1] The ultrasound findings of varicocele include multiple anechoic, serpiginous, and tubular structures of varying sizes. Spermatocele refers to an intraparenchymatous cystic lesion adjacent to the mediastinum testis, in the area of rete testis, and may be septate and communicating with seminiferous tubules. Pathogenesis of simple cysts can be elaborated under two main types: an infant type caused by congenital anomaly (arising from the remnants of the Mullerian and Wolffian ducts) and an adult type caused by trauma or infection, where it is

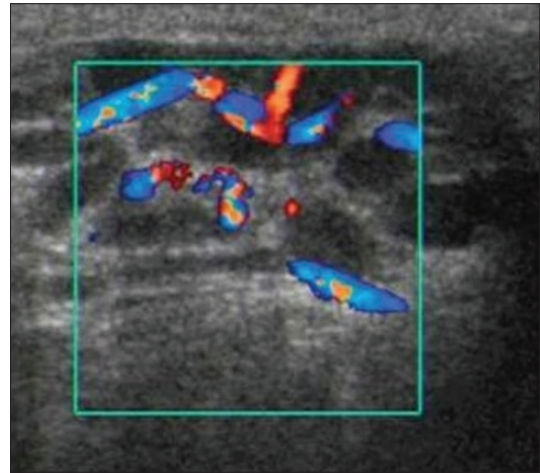


Figure 1: High-resolution color-flow Doppler ultrasound image demonstrating varicocele surrounding the left testis

believed that an infective process may cause occlusion of the draining ducts resulting to a cystic tumor-like lesion. The exact cause of spermatoceles remains unclear but is thought to be due to blockage of the epididymal ducts with proximal dilatation. This may be idiopathic or secondary to an infectious or inflammatory process. An intratesticular spermatocele communicates with the seminiferous tubules, whereas simple ectasia of the rete testis does not do so directly.^[2] Doppler sonography and gray-scale sonography are effective methods in the diagnosis of varicocele and intratesticular spermatocele. At sonographic examination, spermatoceles are well-defined epididymal hypoechoic lesions and demonstrating posterior acoustic enhancement with irregular walls, fine low-level internal echoes, and sometimes septations. Imaging differential considerations of scrotal masses are testicular tumors, hydatid

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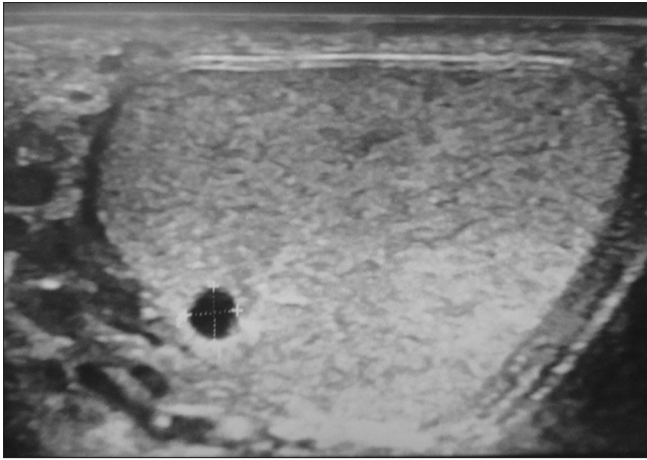


Figure 2: High-resolution ultrasound image demonstrating a well-defined intratesticular cystic lesion with irregular walls and fine low-level internal echoes lying adjacent to the mediastinum testis

cyst of morgagni, epidermoid cyst, cysts of tunica albuginea, epididymal cyst, hydrocele, and spermatocele.^[3] Unlike epididymal cysts, spermatoceles often contain low-level echogenic proteinaceous fluid and spermatozoa and can be septate. Intratesticular spermatocele communicates with the seminiferous tubules; however, ectatic rete testes do not communicate directly. Simple cysts are usually smooth walled and anechoic, while spermatoceles show irregular wall with low-level echoes. Spermatoceles are typically asymptomatic and do not require treatment. Spermatoceles seek intervention when the lesion approximates the size of a testicle. Specific characteristics included individual's age, duration of diagnosis, symptom type, and symptom duration. The location of these benign cysts in the area of the mediastinum and rete testis and the absence of signs of a germ cell tumor may permit testicle preservation. Intervention may be considered for uncomfortable, painful, or progressively

enlarging spermatoceles. The treatment choices can include radical orchidectomy, enucleation of the cysts with testicular parenchyma preservation, or conservative surveillance by ultrasonography. Benign testicular cysts that appear to arise from the intratesticular ducts of the mediastinum and rete testis can be identified with confidence using high resolution ultrasound. A cystic intratesticular lesion adjacent to the mediastinum testis demonstrating communication with the seminiferous tubules is most likely a spermatocele. There were previously reported cases of intratesticular varicocele with extratesticular varicocele. However, concomitant presence of spermatocele with ipsilateral varicocele is a rare entity which has been presented here. Coexistent ipsilateral intratesticular spermatocele with varicocele though is a rarity could very well be a possibility.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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