

## Left paratesticular mass mimicking polyorchidism: A case report

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### ABSTRACT

We report a rare case of primary scrotal lipoma in a 20-year-old patient which clinically mimics a left triorchidism. The patients presented with the left testicular swelling and the ultrasonography of the scrotum revealed an inhomogeneous hyperechoic mass with an inconclusive report. The left scrotal hemi exploration was planned, and intraoperatively, it was found to be a paratesticular mass with an equivalent size corresponding to the left testicle, separate from the left testicle. The histopathology confirms the lipomatous swelling. The post-operative period remains uneventful and the patient has been on follow-up for the past 1 year with no relapse.

**Key words:** Left paratesticular mass, Mimicking, Polyorchidism, Scrotal lipoma

Paratesticular mass is a miscellaneous group of lesions that are extratesticular and can arise from any one of the tissues surrounding the testicles [1]. The extratesticular scrotal contents consist of the epididymis, spermatic cord, and the fascias surrounding the testicles [1]. Unlike intratesticular masses, the majority of paratesticular solid lesions in the adult patient are benign and 70% of paratesticular lesions are located in the spermatic cord, where lipoma is the most frequent histologic type of tumor [2]. Scrotal lipomas are the most common benign mesenchymal tumor of scrotal tissues and the spermatic cord in all age groups [2]. Clinically, the patients may report a sensation of scrotal fullness, without signs of trauma or inflammation. The differential diagnosis includes benign lesions such as leiomyoma of the scrotum, granular cell tumor, neurofibroma, and malignant lesions such as metastasis, liposarcoma, and rhabdomyosarcoma. [2,3]. On physical examination, lipomas may also mimic an inguinal hernia, which may cause unexpected intraoperative findings. The treatment of choice is surgical removal with histologic diagnosis, which is crucial to rule out malignancy, such as liposarcoma or leiomyosarcoma. Polyorchidism or supernumerary testicles are rare anomalies defined by the presence of more than two testicles resulting from an abnormal division of the genital ridge [3]. Triorchidism (three testicles) is the most common form of polyorchidism, and it is usually found on the left side [4,5]. Ultrasound (US) is the primary modality for the evaluation and characterization of a paratesticular lesion [1,3].

We report a case of the left paratesticular lipoma in a 20-year-old male that mimics clinically a supernumerary testes. We also want to emphasize that even a scrotal lipoma can raise different diagnostic issues.

### CASE REPORT

A 20-year-old patient came to our outpatient department with the chief complaint of the left testicular swelling since childhood. The swelling was gradually increasing in size over the past 4–5 years but was not associated with pain. The patient also started having a sense of discomfort with the mass 2 months back which makes him seek medical attention.

General physical examination was unremarkable. On local examination, the scrotum was well developed with midline raphe slightly deviated toward the right side. The right testis was palpable in the right hemi-scrotum with normal position, shape, size, and consistency, whereas, on the left hemi-scrotum, two separate rounded masses were seen, one situated at the bottom and the other just below the base of the scrotum (Fig. 1). Both the masses measured around (4×4) cm each, non-tender, firm in consistency, smooth overlying surface, regular margin, and on pulling down, the masses of the spermatic cord were also pulled.

On ultrasonography, the mass at the bottom of the left hemi-scrotum was homogenous and moderately echogenic suggestive of normal testes, whereas, the other near the base of the scrotum was inhomogeneous, hyperechoic, and situated adjacent to the left spermatic cord suggestive of non-testicular soft-tissue lesion (Fig. 2). There was no sonographic communication with the

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peritoneal cavity and the lesion does not show any change on the Valsalva maneuver. Serum  $\alpha$ -fetoprotein, beta-human chorionic gonadotropin, and lactate dehydrogenase levels were within the normal ranges.

After taking informed consent and getting fitness for surgery as per the protocol of our hospital, the left hemi-scrotal exploration and excision of the mass was done under regional anesthesia. Intraoperative findings showed that a well-encapsulated spherical mass was closely situated alongside the left vas deferens, the vas deferens was seen going beyond the mass and joining the epididymis of the left testes, and no prominent separate vessels supplying the mass are seen (Fig. 3).

The post-operative period remains uneventful and the patient has been on follow-up for the last 1 year with no relapse. On gross examination, the excised mass was well-encapsulated, weighing around 22 g, measured 4×3.5×3 cm, and firm in consistency. Serial cut sections of the specimen revealed yellow, greasy, and lobulated adipose tissue with pale yellow/tan nodules (Fig. 4). Histopathological evaluation of stained sections showed mature adipocytes of uniform size with foci of degeneration of fat necrosis. The tumors exhibited the typical fibrous septal vascularity of mature benign lipomas (Fig. 5).

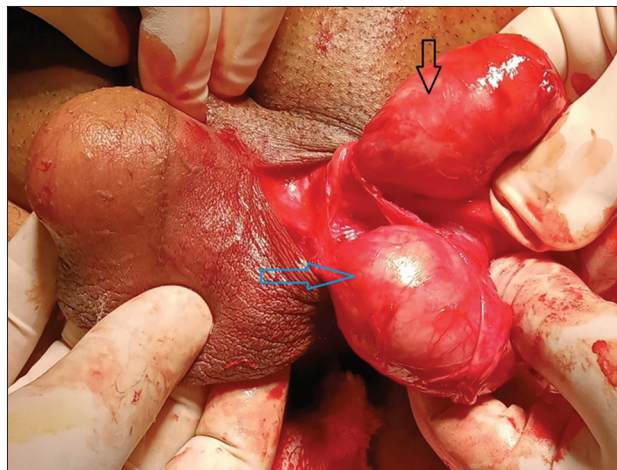


Figure 3: The intraoperative image of paratesticular mass mimicking as left triorchidism (blue arrow showing normal testis and black arrow showing paratesticular mass)

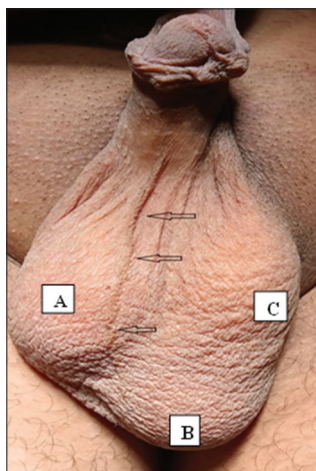


Figure 1: The circumcised penis, well-developed scrotum, deviation of scrotal raphe (black arrows) toward the right, right testes (A), left testes (B), and the left paratesticular mass (C) mimicking left triorchidism

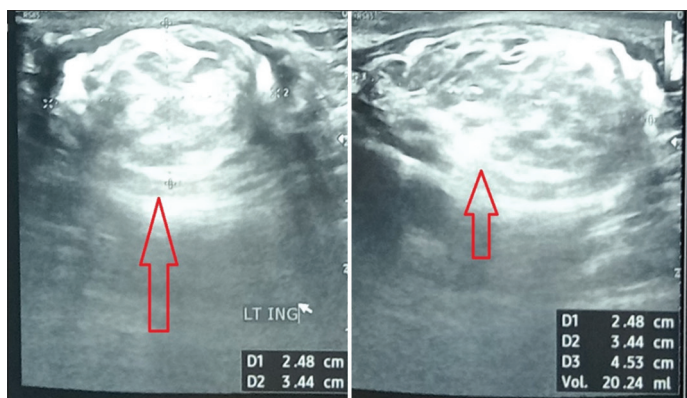
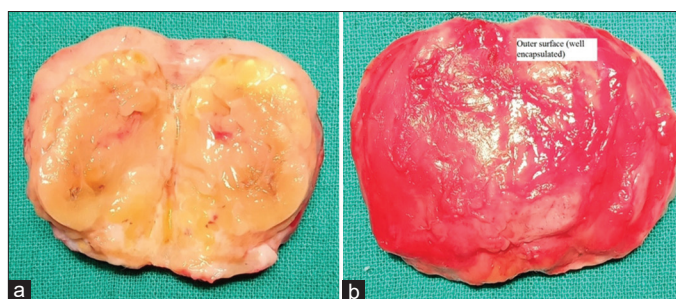


Figure 2: Ultrasonography showing oval-shaped inhomogeneous hyperechoic lesion of size 24×34×45, volume 20cc



Figures 4: The gross pathology study (cut sections) showing yellowish inner soft-tissue (a) and the outer capsule (b)

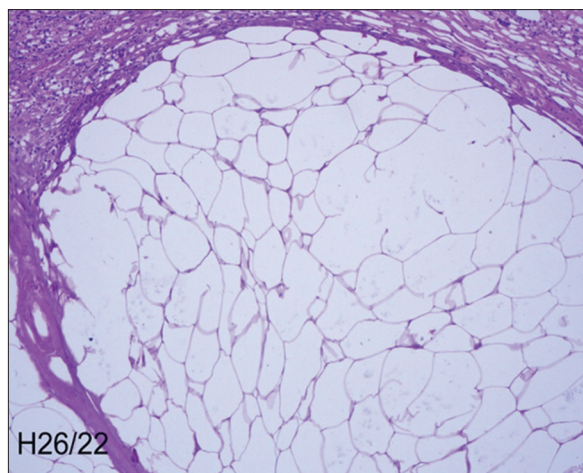


Figure 5: Image revealing lobules of adipocytes with fibrocollagenous stroma and lymphohistiocytic infiltration

### DISCUSSION

The unusual scrotal mass with atypical clinical presentation poses diagnostic challenges to the physician [6]. Paratesticular masses include a group of miscellaneous lesions arising from one of the paratesticular tissues [1,3]. Majority of the lesions are benign such as hydrocele, inflammatory lesions (epididymitis and abscess), epididymal, and spermatic cord cyst, lipoma, adenomatoid tumor, leiomyoma, paratesticular hemangioma, splenogonadal

fusion, polyorchidism, hernia, and scrotal calculi [1,3]. However, as high as, 30% of the paratesticular mass can be malignant such as rhabdomyosarcoma, liposarcoma, leiomyosarcoma, mesothelioma, lymphomas, and leukemias [1,3,7].

US is the primary modality for describing the abnormalities of the paratesticular space and it helps in the localization of the lesion and assessment of its consistency whether it is cystic or solid [8,9]. US is also the cheapest and readily available in low-resource settings, however, it is operator-dependent [10]. The US has low specificity in differentiating benign tumors from malignant and both of them present as non-specific painless paratesticular mass. In equivocal cases, magnetic resonance imaging (MRI) may be done to further characterize the lesion and hence narrow the differential diagnosis. In our case, the patient presented with a background history of a left scrotal lump since childhood with gradually increasing in size over the past (4–5) years and clinically resembled a supernumerary testis. Triorchidism is the most common form of polyorchidism and is typically involved in the left side (65%) [4,5]. Hence, even though polyorchidism is very rare; initially, we put it as first in the differential diagnosis because the paratesticular mass was on the left side and clinically also indistinguishable from the normal testes. Sonographic features of scrotal lipoma are usually homogenous echogenic; however, there may be varied echogenicity depending on the varying proportions of fibrous, myxoid, vascular tissues, and interstices. However, in our case, the paratesticular mass was inhomogeneous hyperechoic with poor vascularity which was not the characteristic ultrasonographic findings of a lipoma and this further confused our diagnosis. And also, with the exception of liposarcoma, none of the other sarcomas can be differentiated from one another radiologically. We could not perform MRI in our case due to the long waiting time for MRI in our institute and due to the patient insistence for surgery at the earliest as well.

Lesions with a complicated appearance are difficult to differentiate from the malignant counterpart of liposarcoma which accounts for 3–7% of all extra testicular tumors and surgery is often warranted [10]. Hence, with those diagnostic dilemmas and patients over concern about the mass, we proceeded with scrotal

exploration and the complete excision of the mass. The mass turned out to be lipoma on histopathological examination. That enabled us to allay patient anxiety and exclude malignancy.

## CONCLUSION

Paratesticular mass can mimic supernumerary testes and even a scrotal lipoma can raise different diagnostic issues. Hence, any paratesticular mass with a doubtful diagnosis should be surgically explored and excised to allay patient anxiety and exclude malignancy.

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