Paratesticular leiomyoma mimicking an inguinal hernia: A rare case report and literature review

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ABSTRACT

Leiomyomas are considered as a rare, benign, slow-growing, and smooth muscle tumours which may present in all regions in the body. The presentation of leiomyoma in genitourinary tract specifically in paratesticular region is extremely rare. The patients may present with palpable, and painful mass in the inguinal region hence mimicking the nature of inguinal hernia. Herewith, we report our experience of 36-year-old male which had been referred for the suspicion of incarcerated inguinal hernia manifesting with painful mass in the right inguinal and testicular region. During testicular exploration surgery, a benign tumour was incidentally discovered. The lesions were then surgically removed by performing radical orchiectomy with the pathology result confirmed the presence of paratesticular leiomyoma. The post-operative course was uneventful and the patient was discharged on first post-operative day. The patient remained free from metastases or local recurrence after 12 months of regular follow up. This case report demonstrated a rare presentation of paratesticular leiomyoma with misleading manifestation of inguinal hernia. Careful and tailored investigation should be performed to avoid misled diagnosis of this case.

1. Introduction and importance

Anatomically, scrotal lesion consisted of intratesticular and paratesticular pathologies [1]. Paratesticular tumours are benign tumours with several histopathological types, including lipoma, adenomatous, leiomyoma, fibroma, hemangioma, neurofibroma, and cystadenoma [2]. The histological type of leiomyoma tumours are exceedingly rare which only five cases of urinary tract leiomyoma tumours have been reported in Southeast Asia [3]. The overall incidence of paratesticular leiomyomas was up to 17.7 % in real world [4]. Leiomyoma was originated from smooth muscle and may be found in various organ regions [5]. Most patients present with asymptomatic, slow-growing mass and are found incidentally. Moreover, the presentation of painful mass was considered to be rare. Paratesticular tumours may occur at any age and have a 3 % chance of malignancy. The treatment recommendation for the tumour is open surgery along with histopathological confirmation [5]. This work has been reported in line with the SCARE and PROCESS criteria [6,7]. Herewith, we report a case of solitary paratesticular leiomyoma presenting with painful mass with misleading diagnosis of incarcerated inguinal hernia. This report will describe further details on the clinical feature and management of paratesticular leiomyoma.

2. Case presentation

A 36-year-old male patient was referred to our institution with the suspicion of right incarcerated inguinal hernia. The chief complaint was right-sided testicular swelling and pain since 1-day prior admission. The mass was palpable and extremely painful. The mass in the inguinal and testicle emerged for two years and gradually increasing. The patient revealed that the mass sometimes disappeared. There were no history of fever or trauma. On physical examination, a 15 × 10 cm sized tumour was palpable in the right testicle extending into the inguinal region with firm consistency. The left testicle was found normal as shown in Fig. 1. The serum tumour markers examination of human chorionic gonadotropin, lactate dehydrogenase and alpha-fetoprotein were within normal limit. The chest x-ray revealed cardiomegaly, and the KUB image revealed no stones in the urinary system. Abdominal ultrasound examination indicated the presence of mass in the Mc Burney area which was previously identified as intestine as shown in Fig. 2.

Surgical exploration of the testicle through the inguinal region was then performed. The mass was identified as hernia. However, due to the tumour was not distinguishable...
from the testicle and there was a suspicion of testicular malignancy, radical orchiectomy was performed. Fig. 3 showed the surgical procedure of this case.

The post-operative course was uneventful, patient was stable and was immediately discharged on the first postoperative day. For further examination, the resected mass underwent histopathological examination. The presence of a mesenchymal spindle tumour on pathology confirmed the diagnosis of paratesticular leiomyoma as shown in Fig. 4. The patient was regularly monitored for the last 12 months. The patient remained free from metastases or local recurrence.

3. Clinical discussion

The paratesticular area is a convoluted anatomical region consisted of spermatic cord and its contents including tunica layer, the epididymis, and testicular appendices [8]. The testicle was not in part of paratesticular region. Tumours in paratesticular region may arise from mesenchymal, epithelial, or mesothelial cells [9]. Leiomyomas in the
which was identified as intestine.

An inguinal technique should be used to examine para

tumour. MRI may also be utilized to assist in the differential diagnosis

Scrotal MRI may be utilized to rule out malignancy or tumour

surgery will facilitate a definitive

Ultrasound may assist in the dif

is operator dependent [15]. Ultrasound may assist in the dif

Feasible [18]. Scrotal CDU may provide information on the location,

dated to avoid the misleading presentation of this disease.

Proneham appearance of the right testicular mass.

paratesticular region are very rare, with only a few cases reported [10].

Leiomyomas are mesenchymal cell-derived benign encapsulated tu

matures are classified into four categories based on four charact

tumours are classified into four categories based on four charac

Desmin deficiency is associated

testicular leiomyoma. Desmin deficiency is associated

Histopathological examination in leiomyoma may reveal the pres

leiomysarcoma thus this test was important to rule out the differen

testicular leiomyoma.

4. Conclusion

Paratesticular leiomyomas are extremely rare benign tumours that may present similarly with an inguinal hernia. Paratesticular leiomyomas should be investigated as a differential diagnosis in men with atypical inguinal mass. Thorough clinical examination, imaging modalities, histopathology and immunohistochemistry may aid in the diagnosis and to avoid the misleading presentation of this disease. Surgical exploration is the most-commonly used treatment. Radical orchiectomy may be performed if there was a sign of testicular malignancy or when the tumour is not distinguishable from the testicle or surrounding tissue.

Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

Provenance and peer review

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Ethical approval

Ethical approval has been acquired in this study.

Consent

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Author contribution

Conceptualization – DI, DMS; Data curation – DI, YUA, IAR; Materials – DI, DMS; Formal Analysis – DI, YUA, IAR; Investigation – DI, YUA, IAR; Methodology – DI, YUA, IAR; Supervision – DMS; Writing original draft – DI, YUA, IAR; Writing, review and editing – DI, IAR, DMS.

Registration of research studies

None.

Guarantor

Doddy M. Soebadi.

Declaration of competing interest

No conflict of interest in this study.

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