

Inflammation and infection

Scrotal abscess mimicking as intrascrotal liposarcoma

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Introduction

Testicular abscess is a rare disease, compared with other inflammatory diseases in the scrotum such as orchitis and epididymitis.^{1,2} It leads to severe inflammation of the scrotum and the whole body and is characterized by sustained fever and strong scrotal pain. We report an interesting case of scrotal abscess suspected as intrascrotal liposarcoma on image examination because of poor inflammatory findings.

Case presentation

A 60-year-old man was referred to our urology department with complaints of right scrotal swelling that gradually increased in size during the past 20 years. His medical history included diabetes, and his surgical history included a right inguinal herniorrhaphy. Physical examination revealed a right enlarged scrotum about the size of a fist, bulging to the right inguinal region, and mild redness. Urinalysis result was normal. Hematology tests revealed a leukocyte count of 5940/ μ L, C-reactive protein level of 1.1 mg/dL, glucose of 224 mg/dL, hemoglobin A_{1c} of 8.4%, lactate dehydrogenase of 203 U/L, α -fetoprotein of 4.3 ng/mL, and human chorionic gonadotropin < 0.5 mIU/mL. Computed tomography findings revealed a right testicular mass, approximately 10 cm, with calcification and fat components present (Fig. 1). Magnetic resonance imaging revealed a capsule and bulkheads with low signal in the T2-weighted image, fat component in the fat suppression image, and contrast effect in the contrast magnetic

resonance image (Fig. 2). Based on image examination, intrascrotal liposarcoma was suspected and right radical inguinal orchiectomy was performed. The estimated blood loss was 173 mL, and the total operative time was 1 hour 50 minutes. The excised tissue was 485 g, characterized by white and yellow elastic solid tissues with mixed tan and purulent tissues (Fig. 3a). Pathological findings revealed diffuse lymphocytic infiltration of mostly granulation tissue. We also observed fat necrosis and active inflammatory findings. The epididymis and testis, which were unclear in the preoperative diagnostic image, were revealed by pathological analysis, and the tissues were damaged due to inflammatory infiltration (Fig. 3b and c). Pathological analysis showed no malignancy, and the condition was diagnosed as scrotal abscess. After surgery, no complications were noted, and there was no recurrence 1 year after the operation.

Discussion

This case was an atypical scrotal abscess that could not be diagnosed by preoperative examination. Hence, we examined the reason why we could not diagnose the condition with preoperative laboratory findings. At first, there was no apparent redness or pain symptom in the scrotum. Second, because urinary analysis did not reveal pyuria, urinary tract infection, which might cause abscess, was considered negative. Therefore, the scrotal abscess was considered negative.

Next, the causes of suspicion of intraductal liposarcoma were examined. The features of the image findings of liposarcoma include

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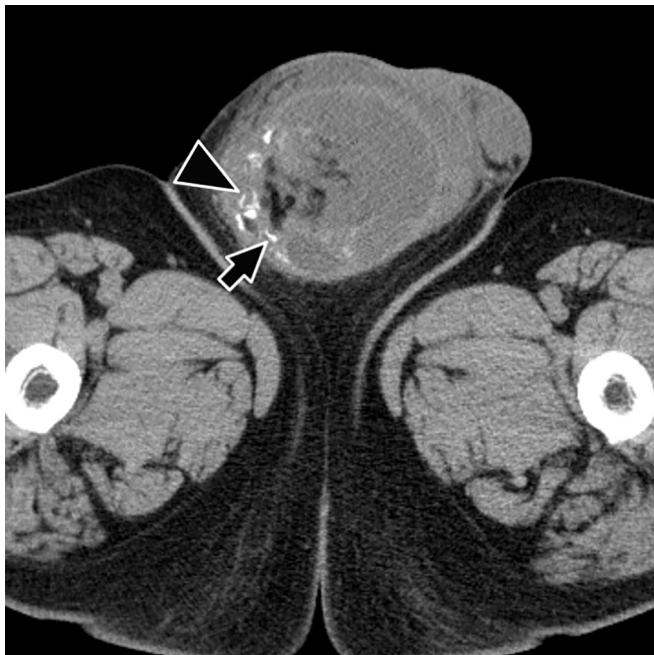


Fig. 1. Computed tomography (CT) of the scrotum. CT revealed a right testicular mass, approximately, 10 cm, with calcification (arrowhead) and fat components (arrow).

inclusion of components other than fat, nonuniformity, recognition of multiple thick bulkheads in the tumor, and existence of the contrast effect of the bulkheads.^{2,3} Preoperative image findings failed to identify the testicular tissue, which was thought to be due to the direct infiltration of the liposarcoma into the testes. However, pathological findings revealed the existence of the testis and epididymis. Thus, because the epididymis and testis showed contrast effect in addition to the septal wall structure and because we misinterpreted the part as testicular tumor showed the contrast effect, it was more difficult to distinguish from intrascrotal liposarcoma.

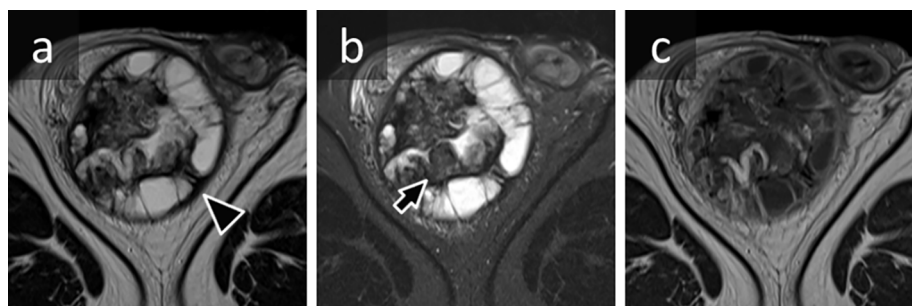


Fig. 2. Magnetic resonance imaging of the scrotum. (a) In the T2-weighted image, a coating and a partition wall (arrowhead) showing low signal were observed. (b) In the fat suppression image, fat components (arrow) were observed. (c) The contrast effect was confirmed.

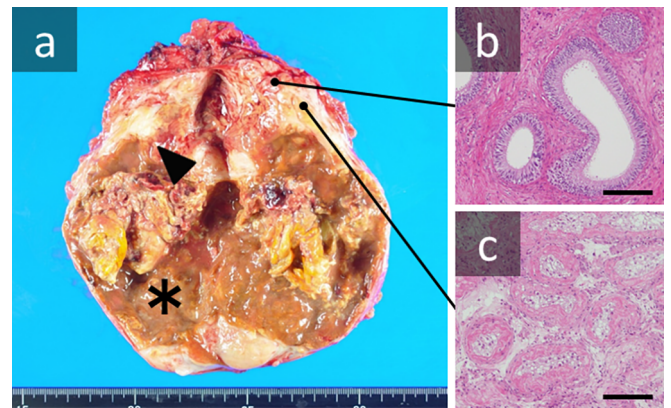


Fig. 3. Macroscopic findings and pathological findings of the excised tissue. (a) White and yellow solid elastic solid tissue (arrowhead) and yellowish brown pusiform tissue (asterisk) were mixed. Pathological findings showed the damaged epididymis (b) and atrophic seminiferous tubule (c) with inflammatory infiltration (hematoxylin and eosin stain). Scale bar indicates 200 μ m.

Finally, the cause of the scrotal abscess was unclear. However, postsurgical medical interview revealed that the patient had a history of puncture of right scrotal swelling and hemorrhagic drainage about 10 years ago. Furthermore, the main locus of the chronic inflammation was considered to be a tissue other than the testis and epididymis by the pathological findings. Therefore, the etiology may be attributed to the infection of the hematoma caused by the scrotal puncture and chronic inflammation in the scrotum.

Conclusion

Some cases of scrotal abscess may have poor subjective symptoms without pyuria, and it must be considered in the differential diagnosis of cases with swelling of the scrotum.

Declaration of interest

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