Case Report

Scrotal Pain as the First Manifestation of Scrotal Leiomyoma: A Case Report

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Primary scrotal leiomyoma is derived from smooth muscle cells of tunica dartos. A 37-year-old Thai man, barber by profession, presented with left scrotal pain and subsequently, a solid mass is reported. As a relatively rare neoplasm, the initial diagnosis and differential diagnosis are intricate. The management was surgical excision. The well circumscribed 1 cm mass appeared as homogeneous, whorled-like, with interlacing fascicles of spindled muscle cells, and a strong positive desmin immunoreactivity. Upon follow-up, pain had disappeared one year after surgery. Reassurance and careful re-examination to reduce anxiety was also needed.

Keywords: *Leiomyoma, Scrotum, Pain, Smooth muscle tumor, Tunica dartos*

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A variety of masses can occur in the testes and paratesticular structures[1,2]. The paratesticular structures can give rise to various benign (lipoma, leiomyoma, hemangioma, or fibroma) and malignant tumors; however, these are extremely rare[3]. The paratesticular tumors encompasses about one-tenth of the testicular tumors[4]. It was found that the incidence rate of testicular cancer was 2.5 to 9.2 per 100,000 cases worldwide[5]. In accordance with different series, 70 to 84% of solid paratesticular tumors are benign[2,6,7], while 3 to 30% are malignant[2,5-8]. Scrotal leiomyoma is a rare benign tumor of a paratesticular lesion. Seigal GP et al found that scrotal leiomyoma was 7.9% of primary neoplasm of the scrotal wall[9]. The paratesticular tumors may be clinically indistinguishable from testicular tumors, thus resulting misdiagnosis initially[2]. Most tumors of this region present as a scrotal mass or swelling, which may or may not be painful and are occasionally accompanied by a hydrocele[2]. Nevertheless, previous reports of scrotal leiomyoma, a rare tumor of the paratesticular structures appears as either painless circumscribed[9-13] or pedunculated mass[14,15]. This report presents the scrotal pain as the first manifestation of scrotal leiomyoma.

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Case Report

A 37-year-old Thai man came to the primary care clinic with the symptom of a localized left scrotal pain for one week. He described the pain as dull and aching, which only exists while walking or standing. There was no referring pain. The pain became very disruptive, as he needed to stand all day working as a barber. The history revealed no urethral discharge, dysurea, or increase in urinary frequency. There was no history of sexual transmitted disease or trauma. No significant previous illness was presented. He did not take any medication regularly. He had never experienced these symptoms before. He is currently married and has one child.

Physical examination revealed a healthy man with normal vital signs. Abdomen was soft and non-tender. No mass was palpable. Hernia was absent in both side of inguinal region. No inguinal lymph node was palpable. Scrotal skin and testes were normal. The patient had visited the clinic three times prior to the operation. Initially, no mass was palpable within the scrotal sac. The first clinical diagnosis was testicular

pain of unknown cause. Analgesics were prescribed. A week later, the pain had subsided while taking medication. Re-examination revealed a mass of 0.5 cm in diameter located at the lateral side of left testes, near the epididymis. It was mobile and non-tender, not fixed to skin or any adjacent tissue. Either varicoceles or epididymitis was suspected. No laboratory test was ordered. Symptomatic treatment was prescribed with analgesics and antibiotic. The patient was advised to return if the symptoms persist or worsen. The patient revisited the clinic for the third time, four months later. The examination revealed the mass of 1.0 cm in diameter. He was advised for surgical excision.

The incision was done through all layers of left scrotal skin and tunica dartos. A firm rubbery whitish mass of 1.0 cm in diameter was found at the lateral side of the testes surrounded by soft tissue. The mass was completely excised without any difficulty. Grossly, the mass was circumscribed, relatively ovoid, firm grey-whitish mass measuring 1.0 x 0.8 x 0.7 cm. The cut surface 0.5 cm in diameter displayed homogeneous and whorled-like appearance. It bulged from the adjacent soft tissue. Microscopically, it was composed of interlacing fascicles of spindled muscle cells (Fig. 1A) that showed deep eosinophilic stain with Masson trichome stain (Fig. 1B). A strong immunoreactivity for desmin was shown in Fig. 1C. There was a weak immunoreactivity to sarcomeric actin (Fig. 1D). The specimen did not show reactivity for S-100 protein.

Discussion

According to previous reports, most patients with scrotal leiomyoma presents with a painless mass. The time required for the patient to visit a doctor varies widely from 4 weeks to 20 years[9-25]. Due to lack of symptoms, most patients wait for a long time before seeking medical care. Compared to the presented patient, due to the scrotal pain disrupting his daily activity, he had to visit a doctor early after only a week of symptom. Pain may trigger by adjacent pain sensitive structure of skin and testicular nerve. If pain was the primary symptom, it may lead to the diagnosis of more common conditions such as epididymitis, hematocele, hydrocele, spermatocele and torsion of testicular appendage[26-30], rather than neoplasm. History, physical examination, and follow-up will increase the accuracy of the diagnosis[31,32]. The scrotal mass can be any pathological conditions according to corresponding anatomy. However, if malignancy is the differential diagnosis a thorough investigation should be done since the treatment between benign and malignancy condition is different. The age of the presented patient was 37 years, which is consistent with the age of 32 to 65 years of the previous reports. The mass was 1 cm in diameter, which is in the range of 0.6 to 9 cm of the same reports. Surgery and follow-up are the treatment of choice for scrotal leiomyoma. Despite surgical treatment, pain may carry on in about 19% of cases[33]. Persistent pain can leave the patient feeling anxious and often leads to frequent visits to the doctor. For the presented patient, the pain disappeared within 1 year after surgery. Careful follow-up, re-examination, ultrasound of scrotum, and reassurance are needed for the high quality of care[34].

In conclusion, solitary scrotal leiomyoma can present with painful scrotum that brings the patient to the doctor much earlier than a painless mass. There are many common diseases causing scrotal pain, however, leiomyoma is a rare differential diagnosis.

References

1. Algaba F, Mikuz G, Boccon-Gibod L, Trias I, Arce Y, Montironi R, et al. Pseudoneoplastic lesions of

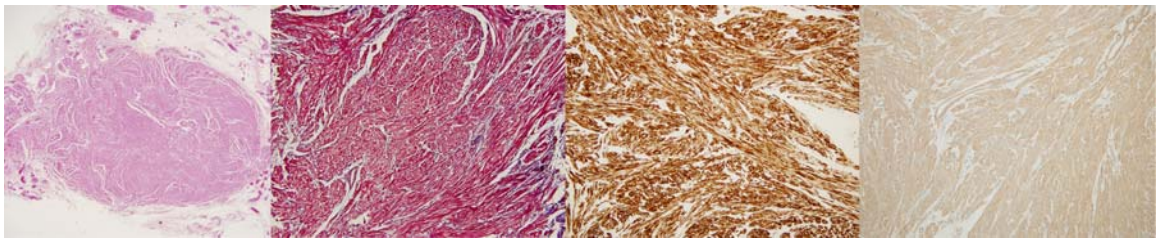

Fig. 1 A: Leiomyoma of scrotum made up of interlacing fascicles of uniform smooth muscle cells (hematoxylin and eosin x20), B: tumor cells with Masson trichrome stain (x200), C: tumor cells with strong immunoreactivity for desmin (x200), D: tumor cells with *sarcomeric actin* immunostain

the testis and paratesticular structures. Virchows Arch 2007; 451: 987-97.
2. Khoubehi B, Mishra V, Ali M, Motiwala H, Karim O. Adult paratesticular tumours. BJU Int 2002; 90: 707-15.
3. Cooper CS, Gallagher BL. Prepubertal testicular and paratesticular tumors [database on the Internet]. eMedicine 2007 [cited 2009 Mar 8]. Available from: http://emedicine.medscape.com/article/1015422-overview
4. Hricak H, Hamm B, Kim B. The epididymis, spermatic cord, and paratesticular tissue: congenital anomalies and tumors. In: Hricak H, Hamm B, Kim B, editors. Imaging of the scrotum. New York: Raven Press; 1995: 129-38. Cited by Ji EK, Cho KS. Granulosa cell tumor of scrotal tunics: a case report. Korean J Radio 2001; 2: 117-20.
5. Huyghe E, Matsuda T, Thonneau P. Increasing incidence of testicular cancer worldwide: a review. J Urol 2003; 170: 5-11.
6. Frates MC, Benson CB, DiSalvo DN, Brown DL, Laing FC, Doubilet PM. Solid extratesticular masses evaluated with sonography: pathologic correlation. Radiology 1997; 204: 43-6.
7. Lioe TF, Biggart JD. Tumours of the spermatic cord and paratesticular tissue. A clinicopathological study. Br J Urol 1993; 71: 600-6.
8. Beccia DJ, Krane RJ, Olsson CA. Clinical management of non-testicular intrascrotal tumors. J Urol 1976; 116: 476-9.
9. Siegal GP, Gaffey TA. Solitary leiomyomas arising from the tunica dartos scroti. J Urol 1976; 116: 69-71.
10. Sarma DP, Santos EE, Hagen CE, Repertinger S. Scrotal leiomyoma. The Internet Journal of Dermatology 2009; 7: 1.
11. Sherwani RK, Rahman K, Akhtar K, Zaheer S, Hassan MJ, Haider A. Leiomyoma of scrotum. Indian J Pathol Microbiol 2008; 51: 72-3.
12. Braun-Falco M, Eberlein-K□nig B, Ring J, Hein R. Scrotal leiomyoma. Hautarzt 2002; 53: 258-60. Abstract [Article in German].
13. Ohtake N, Maeda S, Kanzaki T, Shimoinaba K. Leiomyoma of the scrotum. Dermatology 1997; 194: 299-301.
14. Chang SG, Lee SC, Park YK, Chai SE. Pedunculated leiomyoma of scrotum. J Korean Med Sci 1991; 6: 284-6.
15. Das AK, Bolick D, Little NA, Walther PJ. Pedunculated scrotal mass: leiomyoma of scrotum. Urology 1992; 39: 376-9.
16. Chiong E, Tan KB, Siew E, Rajwanshi A, See H, Esuvaranathan K. Uncommon benign intrascrotal tumours. Ann Acad Med Singapore 2004; 33: 351-5.
17. Philip J, Manikandan R, Vishwanathan P, Mathew J. Symplastic scrotal leiomyoma: a case report. J Med Case Reports 2008; 2: 295. Doi: 10.1186/1752-1947-2-295
18. Celia A, Bruschi M, De Stefani S, Baisi B, Cesinaro AM, Micali S, et al. Bizarre leiomyoma of scrotum. Arch Ital Urol Androl 2005; 77: 113-4.
19. Kim NR, Sung CO, Han J. Bizarre leiomyoma of the scrotum. J Korean Med Sci 2003; 18: 452-4.
20. Sevilla Chica F, Meseguer Garc□a P, Roca Estell□s MJ, G□mez Castro A, Mola Arizo MJ, Sala Aznar A. Atypical or bizarre leiomyoma of the scrotum. Report of one case and bibliographic review [abstract]. Arch Esp Urol 2004; 57: 428-31. [Article in Spanish].
21. Herbert M, Segal M, Hermann G, Sandbank J. Pleomorphic Leimyoma of the scrotum: immunohistochemical stains. Isr Med Assoc J 2001; 3: 543-4.
22. Masood J, Voulgaris S, Atkinson P, Carr TW. A rare symplastic or bizarre leiomyoma of the scrotum: a case report and review of the literature. Cases J 2008; 1: 381. doi: 10.1186/1757-1626-1-381.
23. De Rosa G, Boscaino A, Giordano G, Donofrio V, Staibano S, Maio C, et al. Symplastic leiomyoma of the scrotum. A case report. Pathologica 1996; 88: 55-7.
24. Fadare O, Wang S, Mariappan MR. Pathologic quiz case: a 69-year-old asymptomatic man with a scrotal mass. Atypical (symplastic or bizarre) leiomyoma of the scrotum. Arch Pathol Lab Med 2004; 128: e37-8.
25. Slone S, O'Connor D. Scrotal leiomyomas with bizarre nuclei: a report of three cases. Mod Pathol 1998; 11: 282-7.
26. Abul F, Al Sayer H, Arun N. The acute scrotum: a review of 40 cases. Med Princ Pract 2005; 14: 177-81.
27. Burgher SW. Acute scrotal pain. Emerg Med Clin North Am 1998; 16: 781-809, vi.
28. Dakum NK, Ramyil VM, Sani AA, Kidmas AT. The acute scrotum: aetiology, management and early outcome-preliminary report. Niger J Med 2005; 14: 267-71.
29. Wilhelm E. The wandering testicular pain.Eur Urol 1977; 3: 76-7.
30. Arjhansiri K, Vises N, Kitsukjit W. Sonographic evaluation of the intrascrotal disease. J Med Assoc

Thai 2004; 87(Suppl 2): S161-7.
31. David JE, Yale SH, Goldman IL. Urology: scrotal pain. Clin Med Res 2003; 1: 159-60.
32. Chia SJ, Ganesan N, Foo KT. An overview of acute scrotal pain. Ann Acad Med Singapore 1995; 24: 720-3.
33. Perimenis P, Speakman MJ, Higgins S. Chronic scrotal pain. A study of its causes and management. Int Urol Nephrol 1994; 26: 345-7.
34. Mak CW, Chou CK, Su CC, Huan SK, Chang JM. Ultrasound diagnosis of paratesticular rhabdomyosarcoma. Br J Radiol 2004; 77: 250-2.

รายงานผู้ป่วยที่มาด้วยอาการปวดก่อนพบเนื้องอกกล้ามเนื้อเรียบของถุงอัณฑะ

สมจิต พฤกษะริตานนท์, สุอัชฌา พฤกษะริตานนท์, สำเริง รัตนะระพี, เชิดศักดิ์ พฤกษะริตานนท์

รายงานเนื้องอกปฐมภูมิของกล้ามเนื้อเรียบถุงอัณฑะข้างซ้ายในชายไทย อายุ 37 ปี มาด้วยอาการปวด 1 สัปดาห์ ต่อมาจึงคลำได้ก้อน เนื่องจากมีอาการปวดและเป็นโรคที่พบไม่บ่อยทำให้ไม่สามารถวินิจฉัยได้ และไม่ได้อยู่ในวินิจฉัยแยกโรค ผู้ป่วยได้รับการผ่าตัดก้อนเนื้องอกขนาด 1 เซนติเมตร ผลการตรวจด้วยกล้องจุลทรรศน์และอิมมูโนวิทยาเนื้อเยื่อพบเป็นเนื้องอกของกลุ่มเซลล์กล้ามเนื้อเรียบ อาการปวดหายไปภายใน 1 ปี หลังการผ่าตัด การติดตาม และการตรวจร่างกายซ้ำทำให้ผู้ป่วยคลายความวิตกกังวลได้