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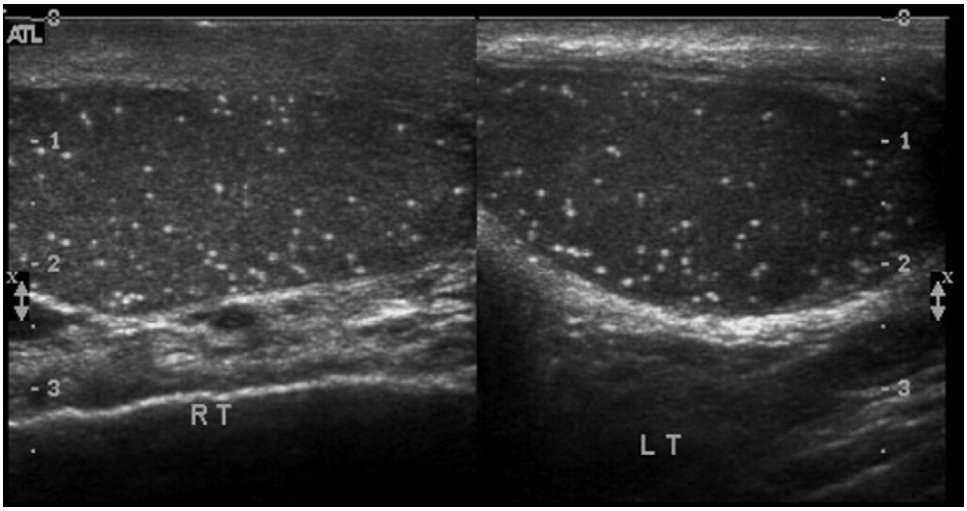

Figure. Bilateral testicular ultrasound. Used with permission of Eric Kent, DO, and Carlos Meletiche, MD, New York Medical College at Metropolitan Hospital Center, New York, NY.

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A 15-year-old boy with medical history of asthma presented to the pediatric emergency department with 2 days of moderate to severe left testicular pain. The patient denied dysuria, penile discharge, recent trauma, sexual activity, or masturbation. Physical examination revealed an afebrile, alert, and uncomfortable boy. He was normotensive and not tachycardic. Abdominal examination was unremarkable. He had Tanner stage 5 genitalia. A small left inguinal bulge was noted. The patient had descended testes and normal lie, with bilateral tenderness. The cremasteric reflexes were intact. Testicular ultrasonography was performed, which revealed good bilateral arterial flow, no inguinal hernia, and the testicular ultrasonograph in the Figure.

IMAGES IN EMERGENCY MEDICINE

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DIAGNOSIS:

Testicular microlithiasis. The ultrasonograph demonstrated the pattern of classic testicular microlithiasis, which is defined as 5 or more echogenicities in any one image that are 1 to 3 mm in size and cast no acoustic shadow.[1,2] They are usually found bilaterally but may be seen in only 1 testicle. These findings can occasionally be due to granulomatous disease and as such might warrant further diagnostic testing such as radiographic imaging of the chest or purified protein derivative testing. Testicular microliths can cause testicular pain. However, the exact mechanism of the pain is unclear. One must rule out torsion and epididymitis as the cause of pain, keeping in mind that sometimes testicular microlithiasis may be incidental to both. In this patient, a chest radiograph revealed no evidence of granulomatous disease or extratesticular tumor. Urinalysis result was normal. Urology consultation was obtained to arrange appropriate follow-up. The patient was discharged in good condition, with pain management and follow-up in a pediatric genital/urology clinic.

Testicular microlithiasis is a rare disorder, with even fewer pediatric cases. The prevalence in patients referred for scrotal ultrasonography has been reported to be between 0.6% and 9.0%.[3] Most are found incidentally by ultrasonographic examinations being conducted for other symptoms such as pain, varicocele, hydrocele, trauma, testicular size difference, or infertility. There is much debate within the literature about their precancerous nature and consequently the need for close follow-up.[4-6] However, there is a high degree of co-occurrence with several conditions that are benign and malignant, including but not limited to testicular and extratesticular germ cell tumors, ischemic damage, cryptorchidism, pulmonary microlithiasis, testicular torsion, AIDS, neurofibromatosis type 1, Klinefelter syndrome hypogonadism, male pseudohermaphroditism, and carcinoma in situ.[7] The current recommendation is to have yearly testicular examinations and sonogram examinations once the patient has had adequate evaluation for concurrent conditions.[6]

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