



What Is Your Diagnosis?

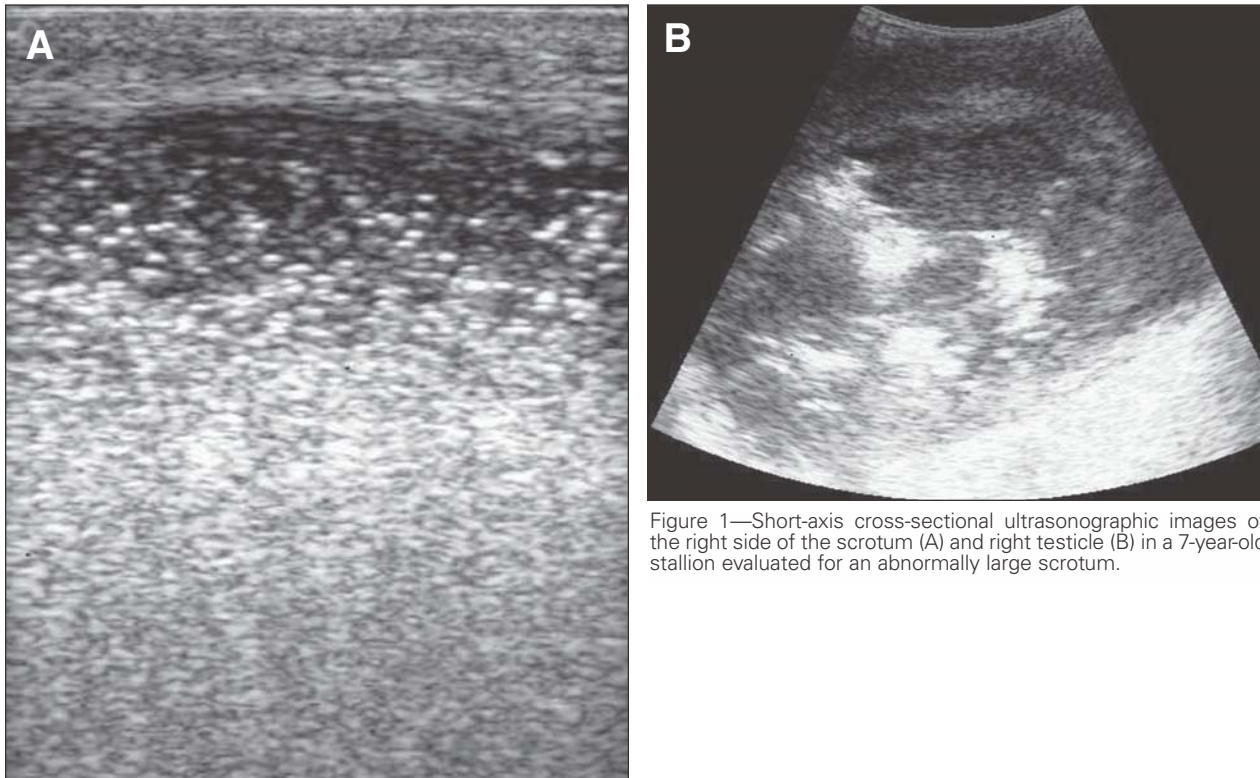


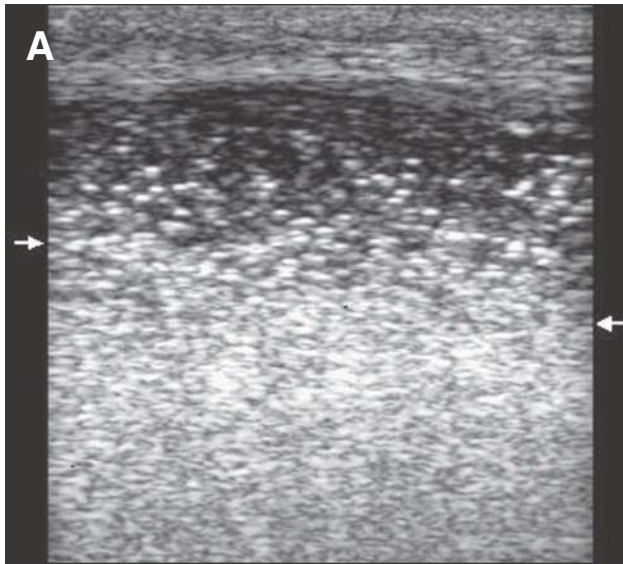
Figure 1—Short-axis cross-sectional ultrasonographic images of the right side of the scrotum (A) and right testicle (B) in a 7-year-old stallion evaluated for an abnormally large scrotum.

History

A 7-year-old Anglo-Arab stallion was evaluated for an abnormally large scrotum. Two months earlier, clinical signs of colic had been observed in the horse. At that time, the referring veterinarian detected a small wound in the cranioventral surface of the right side of the scrotum. Since that time, the size of the scrotum had increased. The horse had been treated with procaine penicillin G (20,000 U/kg [9,090 U/lb], IM, q 12 h) and phenylbutazone (2.2 mg/kg [1 mg/lb], PO, q 24 h) for 6 weeks. Although there had been a decrease in the size of the scrotum, the condition did not totally resolve. The horse's vaccination status was adequate, and it routinely received anthelmintic treatment for gastrointestinal parasites. The horse was fed oats twice daily and alfalfa hay ad libitum and had free access to water. Abnormal physical examination findings included a unilaterally (right side) large (approx 15 cm in diameter), moderately warm, firm scrotum; balanitis; and preputial edema. Palpation of the scrotum elicited signs of pain. Transcutaneous ultrasonographic examination of the scrotum and testicles was performed (Figure 1).

Determine whether additional imaging studies are required, or make your diagnosis from Figure 1—then turn the page ▶

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Diagnostic Imaging Findings and Interpretation

Ultrasonography of the scrotum revealed multiple small hyperechoic foci, indicating cellular or proteinaceous content (Figure 2). Ultrasonography of the testicles revealed a large right testicle (approx 10 cm in diameter) in which numerous hypo- and hyperechoic foci were observed, suggesting orchitis. Differential diagnoses included extratesticular diseases, such as scrotal hernia, accumulation of blood, purulent debris, or peritoneal fluid in the vaginal cavity, and testicular diseases such as orchitis and neoplasia.

Comments

Ultrasonographic examination of the scrotum, testicles, and abdomen may be helpful in determining the cause of scrotal enlargement and in differentiating testicular versus extratesticular lesions.¹² In the horse of this report, an ultrasonographic-guided fine-needle aspirate of the scrotum was obtained; cytologic examination revealed purulent fluid with large amounts of particulate debris (pyocele). Although numerous bacteria were microscopically identified in the aspirate, bacterial culture did not yield growth, which may have been a result of antimicrobial treatment. A pyocele can develop after a penetrating wound, secondary to rupture of an abscess, or as a result of peritonitis.¹³ In the horse reported here, the pyocele was likely associated with a scrotal wound identified by the referring veterinarian.

Because preputial edema and balanitis were detected during the initial physical examination, ultrasonography of the prepuce and penis was also performed. Ultrasonography of the prepuce revealed anechoic loculated fluid in the subcutaneous tissue compatible with subcutaneous edema. Ultrasonography of the penile shaft revealed a hyperechoic band delineating a cavity with echodense fluid and large amounts of particulate debris in which a weak shadowing from the more superficial multifocal hyperechogenicities was detected, suggesting the presence of an abscess (Figure 3). The lack of reproductive activity and the absence of other clinical abnormalities made extratesticular sources of infection unlikely. Thus, it was assumed that the abscess developed as a result of scrotal and testicular lesions.



Figure 2—Same ultrasonographic images as in Figure 1. A—Notice the presence of echogenic fluid compatible with cellular or proteinaceous content (pyocele). The image was obtained with a 10.0-MHz linear array transducer operating at a displayed depth of 5 cm. Arrows delineate the fluid layer between the scrotum and the testicle. B—Notice mixed echogenicity of the testicular parenchyma suggesting orchitis. The distal portion of the image is hyperechoic because of adaptive time gain compensation. The image was recorded with a 4.0-MHz curved (convex) linear transducer operating at a displayed depth of 10 cm.

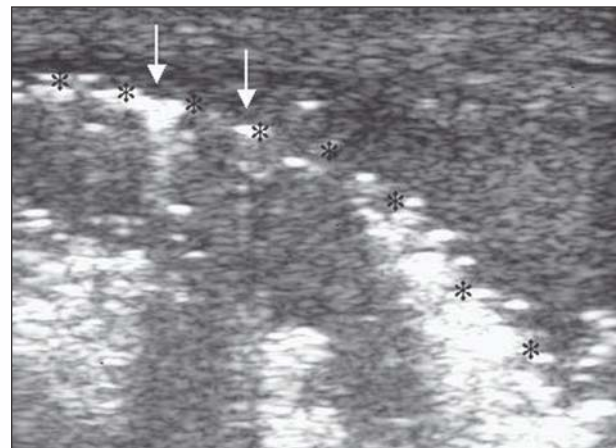


Figure 3—Short-axis cross-sectional image of the penile shaft of the horse in Figure 1. Notice the irregular hyperechoic band (asterisks) delineating a cavity with echogenic fluid and large amounts of particulate debris, and the presence of weak shadowing from the more superficial multifocal hyperechogenicities (arrows). The transducer is positioned on the dorsal surface of the penis with the beam directed ventrally. The image was obtained with a 10.0-MHz linear array transducer operating at a displayed depth of 4 cm.

Orchiectomy of the right testicle and surgical removal of the penile abscess via drainage and curettage were performed. Broad-spectrum antimicrobials and nonsteroidal anti-inflammatory drugs were administered. Two days after surgery, the size of the scrotum and the preputial edema had decreased substantially and complications were not detected.

1. Turner RM. Ultrasonography of the genital tract of the stallion. In: Reef VB, ed. *Equine diagnostic ultrasound*. Philadelphia: WB Saunders Co, 1998;446–479.

2. Love CC, Varner DD. Ultrasonography of the scrotal contents and penis of the stallion. In: Rantanen NW, McKinnon AO, eds. *Equine diagnostic ultrasonography*. Philadelphia: The Williams & Wilkins Co, 1998;253–269.

3. Kasaback CM, Rashmir-Raven AM, Black SS. Theriogenology question of the month. Septic orchitis-periorchitis and epididymitis. *J Am Vet Med Assoc* 1999;215:787–789.