

What Is Your Diagnosis?



Figure 1—Lateral radiographic view of the left shoulder of a 2-year-old Paint Horse with a draining wound.



Figure 2—Fistulogram of the left shoulder of the horse in Figure 1.

History

A 2-year-old female Paint Horse was referred to the Louisiana State University Teaching Hospital for evaluation of a draining wound in the left shoulder of 3 weeks' duration. The wound resulted from a kick by another horse. It had been treated for 2 weeks with antimicrobials and phenylbutazone. The horse was not lame initially but developed progressive lameness 2 days after trauma. Grade-4/5 left forelimb lameness was observed on physical examination. Palpation of the area and manipulation of the affected limb elicited signs of pain. The cranial phase of the stride was substantially shorter for the left than for the right forelimb. A high fibrinogen concentration (600 mg/dl) was the only abnormality detected on CBC and biochemical analyses. Radiographs of the left shoulder were obtained (Fig 1) with the horse heavily sedated. After evaluation of survey radiographs, fistulography was performed (Fig 2), using water-soluble iodinated positive-contrast medium.^a

Determine whether additional imaging studies are required, or make your diagnosis from Figures 1 and 2—then turn the page ♦



Figure 3—Same radiographic view as in Figure 2. Contrast medium injected at the site of the draining wound fills the bicipital bursa (arrows). The only filling defect in the contrast pool is caused by the tendon of the biceps brachii.

Diagnosis

Radiographic diagnosis—Radiopaque foreign bodies or osseous abnormalities are not visible on radiographs of the left shoulder (Fig 1 and 2). Osseous structures of the left shoulder appeared radiographically identical to those of the right shoulder, which had been radiographed for comparison. Communication between the draining wound and bicipital bursa is evident on the fistulogram of the left shoulder (Fig 3). The fistulous tract is not visible, because contrast medium was infused via a balloon-tipped Foley catheter, which did not allow backflow of contrast medium through the fistulous tract. The only filling defect within the pool of contrast medium was associated with the tendon of the biceps brachii.

Comments

Because the wound appeared to communicate with the bicipital bursa and a foreign body was not identified, the bicipital tendon and bursa were examined

sonographically.^b The tendon and bursa appeared to be sonographically normal on the basis of variables defined by Crabill et al.¹ The intertuberal bursa is located between the tendon of origin of the biceps brachii and the intertuberal groove of the humerus. The synovial membrane extends around the edges of the tendon to its superficial surface.² Because of inadequate drainage and accumulation of cellular debris in the dependent part of the bursa, the filly was anesthetized for surgical placement of ingressive and egressive drains. An ingressive drain composed of 0.25-in (outer diameter) orthopedic fenestrated tubing was placed proximal to the wound to facilitate lavage of the bursa with polyionic solution containing 10% dimethyl sulfoxide and to permit administration of amikacin sulfate into the bursa. A 0.5-in Penrose egressive drain was placed in the craniodistal portion of the bicipital bursa to facilitate removal of debris. Results of bacteriologic culture of synovial fluid from the bicipital bursa were negative. The horse was given trimethoprim-sulfamethoxazole (30 mg/kg [13.63 mg/lb] of body weight, PO, q 12 h, for 15 days) and phenylbutazone (2.2 mg/kg [1 mg/lb], PO, q 24 h, for 5 days).

Soft-tissue injury is the most common cause of shoulder lameness in horses. Trauma is the most common cause of inflammation of the bicipital bursa.³ The cranial aspects of the osseous structures of the shoulder and bicipital bursa lie only a few centimeters deep to the skin, making them more susceptible to traumatic injury.⁴ The filly was discharged 10 days after surgery with strict instructions to the owner for hand walking exercise to prevent adhesion formation and to promote drainage and expulsion of debris. The filly was athletically sound with no evidence of residual lameness 5 months after surgery.

^aConray, 282 mg I/ml, Mallinckrodt Medical Inc, St Louis, Mo.

^bOpus 1, 7.5-MH mechanical sector transducer with tissue equivalent stand-off pad, Ausonics Corp, Sydney, Australia.

References

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