
Reese Hand, DVM; Jeffery P. Watkins, DVM, MS, Dipl. ACVS; Clifford M. Honnas, DVM, Dipl. ACVS; Deborah Kemper, DVM

Osteomyelitis of the sustentaculum tali and associated tenosynovitis of the tarsal sheath can be a challenging condition to treat. However, with aggressive medical and surgical treatment, horses can have a good prognosis for return to previous use. Authors’ address: Texas Veterinary Medical Center, College of Veterinary Medicine, Texas A&M University, College Station, TX 77843-4475. © 1999 AAEP.

1. Introduction

The sustentaculum tali (ST) is on the plantaromedial base of the calcaneus. Injuries to the medial aspect of the tarsus may develop osteomyelitis of the ST and tenosynovitis of the tarsal sheath. Osteomyelitis of the ST can be a diagnostic and therapeutic challenge due to the extensive soft tissue swelling surrounding the tarsus, significant lameness of the affected limb, and sympathetic effusion of the tarsocural joint. Historically, osteomyelitis of the ST has rendered a guarded prognosis for survival and a poor prognosis for return to previous level of use.1,2 Recent literature3 has given a better prognosis with aggressive medical and surgical treatment than previously reported. More recently, an excellent prognosis for survival and a good prognosis for pasture sound or light riding was reported.3 The purpose of this study was to complement the recent review3 for an excellent survival rate and to show a good prognosis for return to previous use and even athletic use.

2. Materials and Methods

Records for 10 horses were reviewed that had a diagnosis of osteomyelitis of the sustentaculum tali and associated tarsal sheath tenosynovitis. The median age for the horses was 7 years. The breed distribution included 8 Quarter Horses, 1 Thoroughbred, and 1 American Paint Horse. There were 7 females and 3 males. All horses failed to respond to previous conservative treatment of anti-inflammatories and antimicrobials. The horses were presented 10 to 90 days after initial injury. All horses were treated under general anesthesia with an approach through the tarsal sheath on the medial aspect of the tarsocural joint. Aggressive surgical debridement of the ST and lavage of the tarsal sheath was performed on each horse. Bone and synovial fluid were obtained at surgery and submitted for cytology and culture. One of 10 horses had to go under general anesthesia for a second debridement of the ST. Postoperative standing lavage of the tarsal sheath was performed in 9 of the 10 cases. All
horses were treated with long-term antibiotics for 4 to 6 weeks and with anti-inflammatories. Horses discharged were stall-confined for 4 to 8 weeks with daily hand walking, pasture turnout for 3 to 4 months, and then reexamined before light riding was resumed.

3. Results
Upon initial presentation, all horses were classified a grade III-IV/V lame. Nine of 10 cases were discharged with a 2 to 3 degree improvement in lameness. One horse was euthanized two weeks postoperatively. Follow up information was obtained on 7 out of the 9 horses discharged from the hospital and ranged from 2 to 84 months. One horse was lost to followup and one horse was euthanized one year after surgery due to support limb laminitis. Long-term followup revealed 6 horses returned to previous use (2 barrel racing, 1 cutting, 3 pleasure riding). The remaining horse was 2 months postoperative and was recovering very well at home.

4. Discussion
Previous literature gave a guarded prognosis for survival and a poor prognosis for return to use with treatment of osteomyelitis of the ST.1,2 More recently, an excellent prognosis for survival and a good prognosis for pasture sound or light use was reported.3 However, in 2 of their 5 cases, a deep digital flexor tenectomy or tenotomy had to be performed which limited the athletic use of the horses.3 Our study reports a 90% survival rate and a 60% return to previous use, including athletic use, without performing a tenectomy or tenotomy.

There are several important considerations when diagnosing and treating osteomyelitis of the ST. Radiology is an important diagnostic tool in documenting osteomyelitis of the ST. Four standard views and a special proximodistal (skyline) view of the tarsus are very helpful in isolating lesions involving the ST. Aggressive surgical debridement is an important initial step, including curettage and removal of necrotic bone of the ST and to remove any necrotic or devitalized tissue. Intra-operative and postoperative open lavage is important for removal of exudate from the tarsal canal. Nine out of 10 horses in this study had open lavage postoperatively for an average of 5 to 7 days. Long-term antimicrobials are also essential in treating osteomyelitis and/or tenosynovitis. Horses should be treated for at least 4 to 6 weeks or 2 weeks after resolution of clinical signs.4 Broad spectrum antimicrobials should be started and revised when culture and sensitivities are available. Anti-inflammatories should be used in resolving lameness and swelling and should be tapered according to response of the horse. With aggressive medical and surgical therapy, a positive outcome can be achieved with return to use of horses affected with osteomyelitis of the ST and associated tarsal sheath tenosynovitis.

References