

Radial Shock Wave Therapy for chronic insertion desmopathy of the proximal suspensory ligament in sports horses.

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Introduction:

Suspensory ligament desmopathy is a common disease causing primary and compensatory lameness in the sport horse. The disease can cause long-term lameness restricting the horse's ability to perform at the level of competition achieved prior to the onset of lameness. Current medical treatment options include confinement and rest, controlled exercise protocols, intralesional injections, corticosteroid therapy, anti-inflammatory therapy, bone marrow injection, and corrective shoeing. However, none of these methods consistently result in a satisfactory outcome. (McClure 2004).

Subjects:

Between April 2002 and August 2004, 40 sports horses with chronic proximal insertion desmopathies (23 in the hind limb, 17 in the front limb) have been treated with Radial Shock Wave Therapy (RSWT)

The horses must have had clinical symptoms for at least 3 months and at least one failed conservative treatment approach prior to RSWT. Lameness was graded from 0 to 5 using a AAEP scale (American Association of Equine Practitioners).

Methods

The horses were treated in 3 sessions (at intervals of one/two week, mean: 12 days) with 4000 shockwaves per session. Pressure of 3,5 bar (Energy flux density: 0,14 mJ/mm² approx.) and 6 Hz of frequency.

Device used: Swiss Dolor Clast (EMS-Switzerland).

The horses received sedation with Domosedan and Torbugesic.

The affected leg was lifted and the superficial and deep flexor tendon was pushed laterally and medially in order to be as close as possible to the origin of the proximal suspensory ligament.

2000 shockwaves were applied from each side (medial and lateral).

Evaluation was performed before the treatment, before 2nd RSWT, before 3rd RSWT, 30 days after last RSWT, 90 day after last RSWT:

A special training program was elaborated for the time between the sessions and post shock wave therapy.

Analyses:

The non-parametric Wilcoxon test for dependent samples to compare means of AAEP lameness scale.

Results

The horses showed a considerable lameness decrease 30 days after last RSWT ($p < 0,05$), and 90 days after last RSWT ($p < 0,01$).

90 days after last RSWT, 26 horses (65%) were free of lameness (return to full work) and 8 horses had a distinct lameness reduction. 6 horses showed no improvement.

Side effect and complications were not observed

Conclusion

RSWT is an effective treatment method for chronic insertion desmopathy of the proximal suspensory ligament in sports horses. Further randomized and controlled studies are necessary to underline the results of this investigation.