



## **4<sup>th</sup> CONGRESS OF THE INTERNATIONAL SOCIETY FOR MUSCULOSKELETAL SHOCKWAVE THERAPY (ISMST)**

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### **Radial extracorporeal shock wave therapy for chronic insertion desmopathy of the equine suspensory ligament – a controlled study .**

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In human medicine, extra corporal shock wave lithotripsy is an established therapeutic procedure for treatment of renal calculi. In the last few years extra corporal shock wave therapy (ESWT) also has been used in human orthopaedic treatment, especially chronic insertion tendopathy/desmitis such as "tennis elbow", tendinosis calcarea and pseudarthrosis.<sup>1</sup>

In the veterinary field, the use of ESWT is still right at the beginning.

So far, there is little information about different indications, treatment regimens and long term results. Controlled studies are completely missing.

Since June 1998, at the Tierklinik Telgte, Germany, horses with different orthopaedic conditions have been treated with radial Extracorporeal Shock Wave Therapy<sup>®</sup>. The aims were first to collect experiences with the new therapy; and second to establish the treatment as standard indication for special problems.

Therapy of chronic insertion desmitis/desmopathy of the proximal suspensory ligament in the equine front and hind limb is somewhat frustrating. This condition is characterised by a high rate of recurrence and low long term success. Systemic or local application of antiphlogistics and corticoids, blistering combined with long periods of rest and low grade training and finally surgery (peripheral neurectomy) are described in literature and documented.<sup>2-5</sup>

Long term follow up information about the treatment of chronic longstanding high suspensory desmitis are still missing in veterinary literature. This condition seemed to be ideal for ESWT treatment evaluation, for ESWT is known as a safe, alternative, non-invasive therapy without serious side effects.

In the present controlled study the results of radial ESWT for the treatment of chronic proximal suspensory ligament desmitis are documented.

31 horses with chronic proximal suspensory desmitis and which have already been treated by conventional methods were treated by radial ESWT .

The clinical diagnosis was supplemented by radiographs and ultrasonographic examinations, in a few cases also by scintigraphy. The horses got usually 2 to 3 sessions of shock wave therapy.

The horses were followed up within time frames of 4 weeks and 6 months after the final treatment. In this control examination not only clinical improvement but also radiographic and ultrasonographic changes were recorded. The criteria for success of treatment was free of lameness and return of the horses to full performance.

A retrospective control group consisted of 30 horses with chronic disease of proximal suspensory desmitis that were only treated by conventional methods. This group was used to compare the rate of success between radial ESWT and the outcome of conventional methods of treatment.

71 % (22 out of 31) of the horses treated by radial ESWT resumed full work 6 months after treatment. In the control group there were only 50 % (15 out of 30) that returned to full work.

Additional to the compare of the two groups the influence of different parameters, for example the index of lameness, the affected leg, the kind of use and the results of the radiographic and ultrasonographic examinations, on the outcome of treatment are discussed.

Based on the outcome of this study the radial ESWT seems to be an effective treatment for chronic, therapy resistant cases of proximal desmitis if the suspensory ligament in the horse.

#### Literature:

1. Siebert W., Buch M. *Extracorporeal Shock Waves in Orthopaedics*. Berlin, Heidelberg: Springer Verlag, 1998.
2. Dyson S. *Suspensory Apparatus*. In: Rantanen NW., McKinnon AO eds. *Equine Diagnostic Ultrasonography*. Baltimore: Verlag Willimans & Wilkins, 447 – 473, 1991
3. Personet L., McAllister SM., Mansmann R. *Proximal suspensory desmitits*. Mod Vet Pract 64: 541 545, 1983