

## **Focused extracorporeal shockwave therapy in sport horses**

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Since three years the focused shockwave therapy is getting more and more an important therapeutic tool in equine sports and orthopedic medicine. It is a very effective additional therapeutical tool for a lot of orthopedic problems in the equine athlete. The most common indications are the insertional desmopathies, periostal inflammations and bone exostosis with irregular surface. Because of the special anatomical construction of horses there are lots of places where insertional problems may occur. In contrast to man horses run on four legs and in each of them there are lots of long tendons and ligaments, which can inflamme or damage. Sport horses are used for jumping, dressage and racing events. The biomechanical forces acting on the legs can be extreme, and traumatize soft tissue. The lesions usually take much time before resolution applying conventional treatments. These include: local infiltration injection, hyperaemic local irritation and surgery.

The use of focused shockwave therapy is done after a thorough diagnosis only which includes radiological and ultrasonographical imaging of the area with the potential lesion. All horses need to be sedated with an intavenous injection of 0,014 µg/kg detomidine. Treatment is done with the horse in standing position. General anesthesia is not necessary. The skin of the treated area is clipped sometimes shaved. The energy level of Equitron® (Fa. HMT) used to treat insertional desmopathy is E6, and to treat periostical and bone reactions it is E8 to E9. Three years ago the amount of shockwave which we applied to each lesion was 2,000 impulses. Nowadays we apply 600-800 impulses only.

The distribution of lesions treated within the last three years with ESWT is (total of about 1.670 treatments): 36 % problems of the suspensory ligament (proximal origin at the Metacarpal and Metatarsal bone and distal insertion at the sesamoid bones), 19 % proximal and distal ligaments of the navicular bone, 14% exostosis of the splint-bones, 11% bone-proliferative joint capsulitis in carpal-, fetlock- and phalangeal joints, 6 % superior and lower check-ligament, 14% others.

Based on our experience we conclude that ESWT improves the clinical resolution of the lesions described and reduces the recovery time for equine athletes. The focused extracorporeal shockwave treatment is an important tool in equine sports medicine, and we expect that it will prove effective for more pathological conditions of the horse in future.

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