

# Shockwave Biosurgery and Autologous Growth Factors Combined Therapy in Equine Suspensory Ligament Injuries

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The use of ESWT in equine tendinopathies results in a good or excellent outcome in most cases. However, some horses have difficulty recovering from swelling and lameness, especially those with an echographic diagnosis of a tendinous defect.

We treated 12 horses with a diagnosis of suspensory ligament injuries graded between 2 and 4, and lameness during daily work graded between 2.5 and 3.5/5. Swelling and pain were present in the proximal metacarpal area. Ultrasound showed intrasubstance defects in the ligament that were also palpable. Before the treatment, we obtained 50 cc of blood and we prepared Autologous Growth Factors (AGF) in a double centrifuge process. In one session and under sedation, we applied 4,000 radial shockwaves to the defect area using a Swiss Dolor Clast Veterinary unit (EMS Switzerland). We used a pressure of 2-4 bar at 6-10 Hz. After shockwave application, the area was disinfected and the activated AGF was injected. We developed and standardized a 2-month workout protocol that progressively allows the horses to walk, trot and gallop under veterinary care and echographic controls.

All horses showed improvement in pain, gait, trot and gallop. Swelling decreased significantly in the first two weeks, and did not recur after the workout protocol. There were no complications.

Our encouraging results may reduce the treatment protocols to a single session, improve outcome in tendinopathies with a detectable defect and allow faster recovery of severe suspensory ligament injuries in horses.