

Case study on the analgesic effect of the REPULS® VET Red Light Radiation Lamp in a horse with chronic tendinitis of the superficial flexor tendon (Edinger J.; Zsoldos R.)

(Summary)

In the present case study was investigated on a horse with chronic pain due to tendinitis of the superficial flexor tendon, the pain analgesic of the **REPULS® VET Red Light Radiation Lamp**.

A seven and a half year old Arabian thoroughbred mare was introduced and presented again for examination and treatment in the Equine Clinic, Department of Surgery and Orthopedics,. The horse showed on a straight line, a supporting leg lameness third Degrees (after a 5 degree lameness assessment). A few months earlier, a chronic tendinitis of the superficial flexor tendon was on the front right diagnosed .

At the time of re-admission to hospital the superficial flexor tendon was thickened front right slightly painful and clear. The sonography examination showed significant lesions on the superficial flexor tendon (Fig. 1). The management of anesthesia clearly confirmed the tendinitis as a cause of lameness.

The superficial flexor tendon on the right front was damaged on zone (1B to 2A), was treated again with PRP. Until the seventh day of treatment the horse had a cage rest and subsequently they started an exercise program of (6 days twice 5 min step movement, then twice a day 10 min) step. After eight days, step program, a measurement of lameness was performed on the treadmill. In the following three days the diseased tendon was irradiated with the **REPULS® VET Red Light Radiation Lamp** twice a day 30 min . After one the of rest they continued the treatment for an another three days as the days before with the irradiation. One day after finishing of the treatment with the **REPULS® VET Red Light Radiation Lamp** the lameness was measured once again on the treadmill. Subsequently, the step program continued as the days before without further irradiation. Seven days after the irradiation a third lameness measure on treadmill was conducted.

Results of the treadmill measurements

In the first measurement they detected an asymmetry in the curve between the left and right forelimb . In the subjective assessment on a straight line, the lameness was classified as grade 2-3/5. After the irradiation with the **REPULS ® VET Red Light Radiation Lamp**, a marked reduction in the asymmetry observed in the curve. The statistical analysis of the measurement showed a significant improvement of the lameness on the treadmill. In the subjective assessment the lameness was classified as grade 1-2/5. The third treadmill measurement a week showed after the irradiation again a mild increase of lameness. The measurement results of the third treadmill measurement one week after finishing the irradiation treatment there was again a significantly elevation of the lameness. The results of the third measurement where significantly worse than the second measurement, but also significantly better than the first measurement (Table 1).

Discussion

The investigation on the treadmill was not performed immediately after treatment of the tendon to avoid a greater stress on the tendon at this early stage . The exercise program is a proven rehabilitation after tendon damage and also leads to reduction of the lameness. To distinguish the effect of the **REPULS ® VET Red Light Radiation Lamp** from the effect of the movement program, they carried out a control measurement, a week after ending the irradiation treatment . This measurement was again a deterioration in the lameness

Which showed the significant improvement in the second measurement, a clear indication of the pain reducing effect of the **REPULS ® VET Red Light Radiation Lamp**.

This case is thus a clear indication that the irradiation has led to a rapid reduction of pain in the affected tendon area, because after cessation of irradiation, the lameness was clear again, but not in strength as it was before irradiation. The horse remained during the irradiation very quiet, which is remarkable because the horse was a flurry of general behavior, but accepted the irradiation very well.



Figure 1: A Transverse sonogram of the area 2 A, the cross section is the clear Hypoechogenität the superficial flexor tendon with acute damage to the lateral border of the tendon visible (arrow). B longitudinal sonogram in the area of acute tendon injury (arrow). C Transverse sonogram of the zone 2A comparative measurement of the cross-sectional areas of the superficial and deep flexor tendon.

Table 1: Graph of the average and variations of the asymmetry between left and right forelimbs of the three treadmill measurements.

