

LONG TERM STUDY OF REHABILITATION FROM LAMINITIS IN 29 HORSES UTILIZING COMPOSITE SHOES

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Laminitis in the horse has long been considered to carry a grave prognosis. Many studies have given insight into the patho-physiology and treatment of laminitis yet mortality remains common. Perhaps one factor contributing to the lack of successful treatment is the paucity of long term studies regarding the rehabilitation of horses diagnosed with laminitis.

We followed 29 horses (mean age 13.4yrs), 9 QH, 8 Arabians, 5 Warmbloods, 4 TB, and 3 others, over an average of 12 months. All horses were clinically diagnosed with severe, bi-lateral, forelimb laminitis at the chronic stage. Additionally, 12/29 horses were diagnosed with insulin resistance and 4/29 with Cushing's syndrome. Only one horse in this study underwent a surgical procedure in attempt to treat the laminitis.

All horses entered rehabilitation and were treated with precisely monitored trimming of the hoof and the use of composite, glue-on shoes. Central to our technique is to trim to bring the P3 palmar angle into an acceptable range, increase weight bearing in the caudal portion of the hoof¹, and to use shoes which closely match the mechanical properties of the biomaterials of the natural hoof². The rehabilitation was documented by means of calibrated radiographs and digital photographs, all of which are available.

Assessment of outcome of rehabilitation was judged at the end of rehabilitation by monitoring Obel grade lameness, standard parameters on the lateral to medial digital radiograph of the distal limb³, and hoof morphology using digital photographs. Within a mean of 3 months, 22 of 29 horses improved to an Obel grade 0; the remaining 7 had an Obel grade 1. Two important measures, sole depth and palmar angle, improved in all horses in the study. One horse in the study was euthanized for complications not related to laminitis, however, 28/29 horses returned to use.

In this study horses affected with severe chronic laminitis had a favorable prognosis for survival, and surgery was required on only 1 out of 29.

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2. Kasapi, M., Gosline, J., Design complexity and fracture control in the equine hoof wall, J. of Exp. Biology, Vol. 200, Issue 11, 1997.
3. Redden, R., Clinical and Radiographic Examinations of the Equine Foot, AAEP Proceedings, New Orleans, LA, USA, 2003.