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Treatment of hindlimb proximal suspensory desmitis

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Cases of hindlimb proximal suspensory desmitis (PSD) often stay lame despite protracted periods of convalescence and apparent healing of the ligament. It has been hypothesised that this is due to the development of a local compartment syndrome and neuritis.

Conservative and medical management
Rest alone has a very poor prognosis in the hindlimb, with a success rate of less than 20%. One-off regional infiltration with corticosteroids (e.g. 10 mg triamcinolone in 3 ml of local anaesthetic) can be beneficial in decreasing the inflammation in acute cases. It can also be useful in managing low-grade chronic/active cases in the short term. Platelet rich plasma (PRP) is the currently favoured biological product for the treatment of PSD. It contains a number of anabolic growth factors, and there are a number of commercially available systems that allow the product to be easily used in practice. It can be used on its own in cases of acute desmitis, or can be used in conjunction with other forms of treatment. Intravenous infusion of bisphosphonates can be useful in some cases of enthesis-related pain.

Extracorporeal shockwave therapy (ESWT)
Extracorporeal shockwave therapy has now been employed for a number of years in the treatment of hindlimb PSD, and improves the outcome to about 40% (Fig 1). I tend to use it in either mild, acute cases or for the management of low-grade, chronic cases, and continued treatments may be necessary. Clinically there does not seem to be any difference between radial and focused machines in the outcome following treatment. I now use higher settings for the hindlimb than the forelimb: with the EMS Swiss DolorClast Vet 2500 pulses at 3.5 bar with a 10 mm applicator vs. 2000 pulses at 3 bar.

Surgery
a) Ligament splitting (desmoplasty)
Hewes et al. (2006) has described ultrasound guided percutaneous ligament splitting under general anaesthesia for the management of chronic hindlimb PSD, with encouraging results. However, there is less decompression than can be achieved with the open surgical technique which I will describe later.

b) Osteostixis
The drilling of multiple holes into the region of the origin of the suspensory ligament was originally described for the treatment of nonhealing fractures in this region but has also been employed...
for the management of proximal suspensory desmitis (Launois et al. 2000). This is a relatively crude technique however, and there must be questions over its benefits in a true case of desmitis, although there is logical application in the management of non-responsive bone-related pain. I used it in combination with plantar metatarsal neurectomy and fasciotomy for treating hindlimb PSD with a component of bone or enthesis-related pain, but poor results led to using it more sparingly.

c) Plantar metatarsal neurectomy and fasciotomy
This treatment was developed as the surgical option for the management of proximal suspensory ligament desmitis in the hindlimb. This procedure combines decompressive fasciotomy of the deep laminar plantar metatarsal fascia with neurectomy of the deep branch of the lateral plantar nerve. This nerve branch is the common origin of the medial and lateral plantar metatarsal nerves, which apply sensory innervation to the origin of the suspensory ligament. Surgery has been restricted to those cases that have had a very good response to a block of the deep branch of the lateral plantar nerve. Over 600 horses have been operated on by the author to date and long-term follow-up has yielded a long-term success rate of 80% returning to normal function. The surgical technique will be described, and approximately 4–5 cm of nerve is removed through a 3.5 cm incision (Fig 2). Post operative complications are rare but an appropriate convalescent period must be allowed for more acute injuries. Treatment of other issues that arise during rehabilitation is important and it can take some time for the horse to fully muscle up again.

References