Clinical Commentary

Superficial digital flexor tendon injuries in teenage and older horses

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Introduction

The report by Smith and Mair (2007) of 9 elderly (18–22 years of age) pleasure riding horses with spontaneous unilateral rupture of a forelimb superficial digital flexor tendon (SDFT) makes an important contribution to the literature, most particularly because it reports a fairly rapid and complete recovery for light work in all horses. I am aware that historically the dramatic clinical signs at the time of onset of lameness have prompted some practitioners to presume a dire prognosis, with the result that horses have been humanely destroyed. This paper provides sound clinical data that such horses can be returned to light work within 6 months of injury.

Interestingly, given the high frequency of occurrence of bilateral SDFT strain injuries in racehorses and sports horses, at the time of follow up examinations no ultrasonographic abnormalities were identified in the nonlame limb in the horses in this series, although one of the 9 horses did subsequently sustain a rupture of the contralateral SDFT. It is not recorded whether both forelimbs were examined ultrasonographically at the time of initial presentation. This also contrasts with clinical experience of SDFT lesions in the carpal and proximal metacarpal region in older sports horses and ponies (usually >12–15 years of age), which may present with a sudden onset of lameness. Although lameness is often unilateral, bilateral lesions are frequently identified ultrasonographically (Fig 1).

In these horses and, less commonly, ponies, the diagnosis may be challenging because although lameness may be quite severe, there may be no obvious localising clinical signs. In some horses there may be mild swelling in the proximal metacarpal region or distension of the carpal sheath, and in these horses there may be pain elicited by firm palpation of the SDFT. Lameness is in some horses accentuated by flexion of the carpus. It is often necessary to use local analgesia to identify the source of pain causing lameness. Perineural analgesia of the palmar nerves just distal to the carpus may improve the lameness, but in others lameness may be unaffected because the lesion extends more proximally. Therefore perineural analgesia of the median and ulnar nerves may be necessary to alleviate the lameness.

Fig 1: Transverse (a) (medial to the left) and longitudinal (b) (proximal to the left) ultrasonographic images of the proximal metacarpal region approximately 3 cm distal to the accessory carpal bone of the left forelimb of a 14-year-old crossbred Pony Club event horse. There were no palpable abnormalities of the proximal metacarpal region. Moderate lameness was exacerbated by carpal flexion. Perineural analgesia of the median and ulnar nerves abolished the lameness. Radiography of the carpus and proximal metacarpal region revealed no abnormality. There is a hypoechoic lesion in the palmar aspect of the enlarged superficial digital flexor tendon. The horse exhibited left forelimb lameness, although ultrasonographic lesions were present bilaterally.
These SDFT lesions in the carpal and proximal metacarpal region have often been progressive ultrasonographically, or have failed to resolve with conservative management, in contrast to the horses with mid-metacarpal rupture of the SDFT described by Smith and Mair (2007). Even with relatively focal lesions lameness has been a persistent feature, despite prolonged periods of rest. Alternatively, in some horses lameness has resolved with rest, although ultrasonographic abnormalities have persisted, and lameness has recurred when horses have returned to full work. Obviously full work for a competition horse is different to the activities of a pleasure horse. However, I am not aware of any of the SDFT lesions in the carpal or proximal third of the metacarpal region ever progressing to spontaneous rupture of the tendon, in contrast to the lesions in the mid-metacarpal region described by Smith and Mair (2007).

In the series described by Smith and Mair (2007) 7 of the 9 horses were geldings; whether this reflects a definite gender bias cannot be assessed based on the small number of horses in the study. In my experience of SDFT lesions in the carpal and proximal metacarpal region in older sports horses (and less commonly general purpose riding horses), there has been a predominance of geldings, but this probably reflects the greater number of male competition horses, rather than a genuine sex risk factor.

Proximal lesions of the SDFT in older sports horses are a therapeutic challenge, with a poor response to conservative management or desmotomy of the accessory ligament of the SDFT (superior check ligament desmotomy). For horses with lesions extending into the carpal canal surgical release of the carpal retinaculum is sometimes successful (Ross 2003; S.J. Dyson, unpublished data). Whether stem cell therapy offers an alternative more successful treatment strategy remains to be seen.

References
