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Proximal suspensory desmitis: clinical, ultrasonographic and radiographic features

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Summary

Clinical, ultrasonographic and radiographic features of proximal suspensory desmitis in the forelimb and the hindlimb are described. Acute cases may present with slight, localised, oedematous swelling, heat, distension of the medial palmar (plantar) vein and/or pain, whereas chronic cases or those rested immediately after onset of lameness usually have no detectable clinical signs suggestive of the source of pain. In these cases local analgesia is required to identify pain in the proximal metacarpal (metatarsal) region. Transverse ultrasonographic images of the suspensory ligament usually yield the most information and a variety of abnormalities of the proximal suspensory ligament have been identified including i) enlargement ii) poor definition of one or more of the margins of the suspensory ligament, especially dorsally iii) a well circumscribed, central hypoechoic area iv) one or more poorly defined hypoechoic areas, central or more peripheral v) a larger area of diffuse decrease in echogenicity (such lesions were seen most commonly in the hindlimb and appeared to warrant a more guarded prognosis than focal lesions). Radiographic abnormalities were identified in hindlimbs more often than in forelimbs and were usually seen in a dorsopalmar (dorsoplantar) view, and/or a lateromedial projection. Radiographic abnormalities included sclerosis of the trabeculae, a change in orientation of the trabeculae and entheseophyte formation. The most extensive radiographic abnormalities were seen together with an ultrasonographic type v lesion. The prognosis for return to full athletic function and sustained future soundness was better for forelimbs than hindlimbs, especially if the lesion, identified ultrasonographically, resolved.

Introduction

LAMENESS associated with the proximal metacarpal region may be due to a number of causes including proximal or high suspensory desmitis (Marks, Mackay-Smith,Leslie and Soule 1981; Selway 1982; Personett, McAllister and Mansmann 1983; Genovese, Rantanen, Hauser and Simpson 1986; Stashak 1987; Dyson 1988), desmitis of the accessory ligament of the deep digital flexor tendon, localised superficial digital flexor tendonitis, fatigue fractures of the palmar cortex of the third metacarpal bone (Dyson 1988; Ross, Ford and Orsini 1988; Lloyd *et al* 1988), avulsion fractures of the origin of the suspensory ligament (Bramlage, Gabel and Hackett 1980), osseous cyst-like lesions (Ellis 1985; Dyson 1988) or periostitis of the second or fourth metacarpal bones. The radiographic features of proximal suspensory desmitis in the forelimb (Huskamp and Nowak 1988) and hindlimb (Dik and Gunsser 1989) have been described briefly.

The results of treatment of a series of horses, in which the diagnosis of proximal suspensory desmitis was made ultrasonographically, have not been documented; nor has a group of horses with hindlimb proximal suspensory desmitis been described.

The purpose of this paper is to discuss the clinical, radiographic and ultrasonographic features of proximal suspensory desmitis in the forelimb and hindlimb. For the purposes of this paper, proximal refers to the proximal one-third of the metacarpus or metatarsus.

Materials and methods

Forty-two horses with ultrasonographic evidence of proximal suspensory desmitis were examined at the Equine Clinical Unit of the Animal Health Trust between January 1987 and December 1989. Twenty-nine (**Group 1**) were presented for lameness evaluation; pain was localised to the proximal metacarpal or metatarsal region using selective local analgesia. Thirteen (**Group 2**) presented with a recent history of heat, pain and or swelling in the proximal metacarpal region, associated with lameness.

Clinical examination

All horses were subjected to a comprehensive clinical examination at rest and moving in hand on a hard surface. Horses in **Group 1** were also lunged on hard and soft surfaces and sometimes ridden. Selective local analgesia was used to determine the site(s) of pain. In the forelimb, following exclusion of the metacarpophalangeal joint and more distal limb by palmar (mid cannon) and palmar metacarpal (distal to the 'button' of the second and fourth metacarpal bones) nerve blocks, subcarpal lateral palmar and medial and lateral palmar metacarpal nerve blocks were performed using 6 to 8 ml of mepivacaine, 1 per cent (Dyson 1984; Dyson 1988). In the hindlimb, plantar (mid cannon) and plantar metatarsal (distal to the 'button' of the second and fourth metatarsal bones) nerve blocks were followed either by fibular and tibial nerve blocks (Dyson 1984) or by subtarsal nerve blocks. The latter were performed with the limb bearing weight. A small volume (1 ml) of local anaesthetic was deposited subcutaneously plantar to the base (head) of the fourth metatarsal bone. The needle was inserted more deeply, directed medial to the fourth metarsal bone and dorsally. After aspiration to ensure that synovial fluid was not withdrawn, 3 ml of local anaesthetic was injected. The needle was withdrawn partially, directed further dorsomedially and an additional 3 ml of local anaesthetic was deposited. If there was excessive resistance to injection, the needle was withdrawn slightly prior to injection.

The horses were re-evaluated after standing for 15 mins and, if not improved, again after a total of 30 mins.

In those horses in which fibular and tibial nerve blocks were performed, the lameness was re-assessed at 15 min intervals for up to 90 mins. Intra-articular anaesthesia of the middle carpal and the tarsocrural, centrodistal and tarsometatarsal joints was performed on separate occasions when appropriate, to exclude these joints as potential sources of pain.

Radiography

Radiographic examination of the proximal metacarpal (metatarsal) region was performed using dorsopalmar (dorsoplantar), lateromedial, dorsolateral-palmaro (plantaro) medial oblique and palmaro (plantaro) lateral-dorsomedial oblique views. High definition screens and appropriate film (Kodak XS) were used and exposure factors ranged from 65 kV, 13 mAs to 70 kV, 16 mAs. Views were repeated using different exposure factors if necessary. When abnormalities were identified, comparative views of the contralateral limb were also obtained.

Ultrasonography

Ultrasonographic examination of the palmar metacarpal (plantar metatarsal) soft tissue structures was performed using a 7.5 mHz linear transducer (DSL 300, Diagnostic Sonar). Transverse and longitudinal scans were obtained. The limbs were prepared by fine clipping, washing and liberal application of coupling gel. Images were recorded using a Polaroid camera and Polaroid type 611 film.

Treatment

Horses were treated by box rest and a controlled, ascending exercise regime for four weeks to nine months (Table 5). The majority of horses were re-scanned at intervals of four weeks to three months. Full work was resumed either when the ultrasonographic lesion was considerably reduced in size or no longer detectable; or when, after a minimum of six months' rest, no change in the appearance of the lesion was detected over at least a three month period.

Results

The majority of horses were mature competition horses, mostly geldings (Table 1). Duration of lameness in **Group 1** ranged from less than one week to many months (Table 2), but in **Group 2** was less than four weeks. Eighteen horses in **Group 1** had forelimb lameness and 11 hindlimb lameness whereas, in **Group 2**, all horses showed forelimb lameness.

Clinical features

In **Group 1**, 19 of 29 horses had no detectable palpable abnormality in the proximal metacarpal or metatarsal region whereas, in **Group 2,** heat, pain and or swelling was detected in 12 of 13 horses (Table 3).

Severity of lameness at the trot varied from half (on a scale of 0 to 4) to 2. In **Group 1**, flexion of the metacarpophalangeal (metatarsophalangeal) and more distal joints exacerbated lameness in eight of 17 horses with forelimb lameness and eight of 11 with hindlimb lameness.

All horses in **Group 1** with forelimb lameness showed substantial improvement following palmar and palmar metacarpal (subcarpal) nerve blocks. Rarely was lameness alleviated totally. Five horses, in which other concurrent lameness was also identified, had shown some response to regional anaesthesia of the more distal limb. Subtarsal nerve blocks were performed in seven of the 11 horses with hindlimb lameness. Three of these were lame bilaterally, two of which became lame on the contralateral limb after subtarsal local analgesia. Local analgesia was repeated in the contralateral limb and improvement was observed again after subtarsal nerve blocks. The remainder, and those horses in which fibular and tibial nerve blocks were performed, showed substantial improvement in the lameness, although were not rendered sound. Improvements following fibular and tibial nerve blocks usually took longer (more than 45 mins) to develop than following subtarsal nerve blocks (less than 30 mins).

Radiographic abnormalities

Three types of radiographic abnormality of the proximal aspect of the third metacarpal (metatarsal) bone were identified: i) sclerosis of the trabecular pattern in the dorsopalmar (dorsoplantar) view, extending from the subchondral bone plate a variable distance distally (Figs 1a and 2); ii) alteration of the orientation of the trabecular pattern dorsal to the palmar (plantar) cortex with or without sclerosis, seen in the lateromedial view (Figs 1b, 3 and 4); iii) projection of new bone (entheseophyte formation) on the palmar (plantar) aspect of the bone seen in a lateromedial view (Fig 5).

In **Group 1**, radiographic abnormalities were identified in six

TABLE 1: Age distribution, gender and occupation of horses with proximal suspensory desmitis

3 years or less	2
4 - 6 years	11
7 - 10 years	24
11 years or more	5
Mares	9
Geldings	31
Stallions	2
Eventing	20
Show jumping	3
General purpose	12
Racing	5
Dressage	2

TABLE 2: Duration of lameness of horses in Group 1, related to the presence or absence of radiographic abnormalities

Duration of lameness	No radiographic abnormalities	Radiographic abnormalities
Less than 7 days	1	1
1 to 4 weeks	2	1
4 to 8 weeks	4	5
8 to 12 weeks	3	1
More than 12 weeks	3	8
Total	13	16

Table 3: Clinical features of horses with proximal suspensory desmitis

	Group 1	Group 2
Heat	2	3
Distension of medial palmar vein	0	3
Swelling		
i) diffuse oedema	1	6
ii) rounding of margins of suspensory ligament	2	
Pain	6	5

Several horses showed more than one abnormality

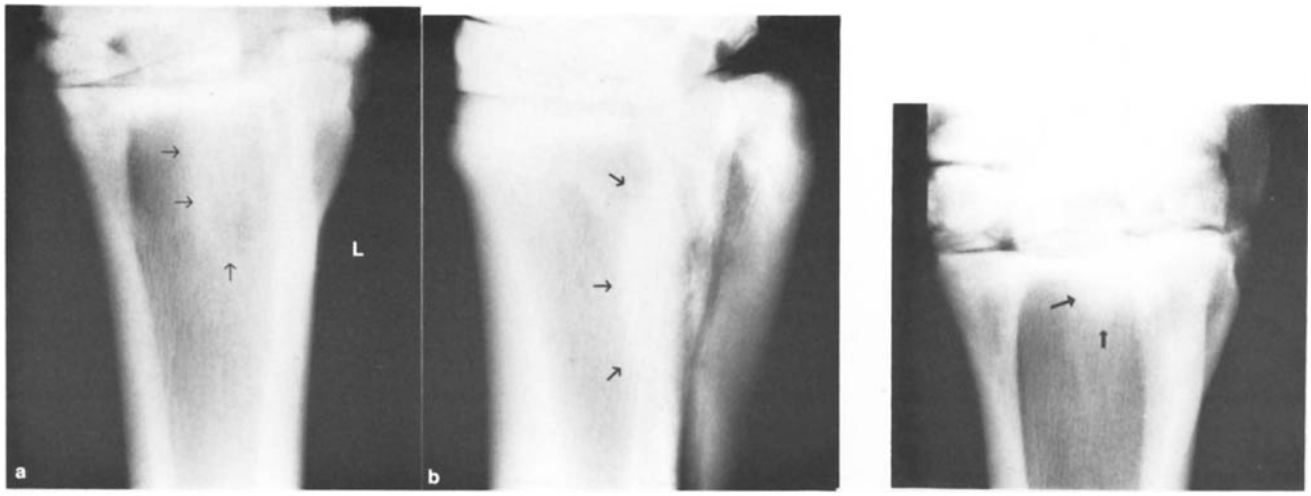

Fig 1: Dorsoplantar (a) [left] and lateromedial (b) [centre] views of the proximal metarsus showing (a) diffuse sclerosis of the lateral (L) half of the bone and (b) sclerosis of the subcortical bone on the plantar aspect. This is the same horse as Fig 6b

Fig 2: (right) Dorsoplantar view of a proximal metatarsus; sclerosis of the lateral part of the bone extends from the subchondral bone plate distally (arrows)

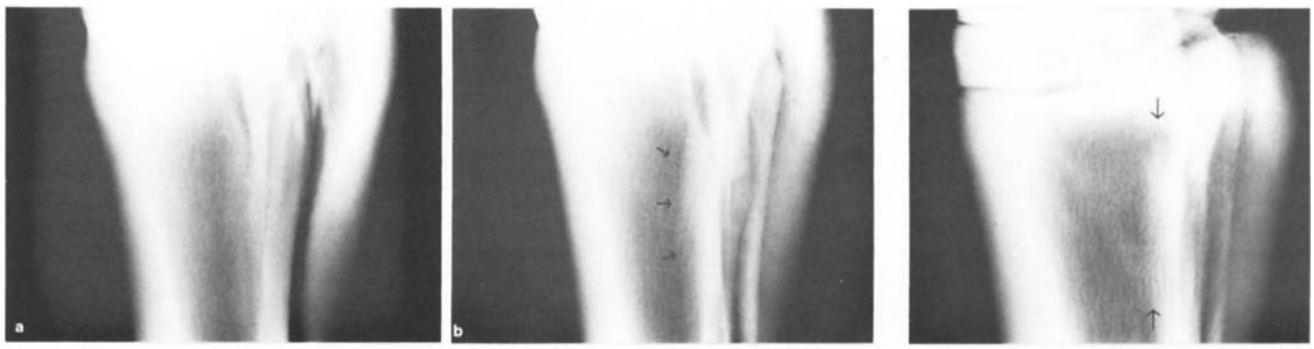

Fig 3: Lateromedial views of the a) [left] left, normal proximal metatarsus and b) [centre] right, abnormal proximal metatarsus; there is sclerosis of the subcortical bone on the plantar aspect of the third metatarsal bone (arrows)

Fig 4: [right] Lateromedial view of the proximal metatarsus; note the oblique orientation and sclerosis of the trabeculae beneath the plantar cortex of the third metatarsal bone (arrows). This is the same horse as Fig 10

of 17 horses with forelimb lameness and 10 of 11 with hindlimb lameness (2 bilaterally) and were more common in horses with longstanding lameness (Table 2). The lesions identified in forelimbs were subtle, whereas the lesions in hindlimbs were more extensive and severe. Radiographic abnormalities were seen on a dorsopalmar (dorsoplantar) view only in eight horses, a lateromedial view only in one horse and in both views in seven horses. No significant radiographic abnormality was identified in **Group 2** horses.

Ultrasonography

Abnormalities detected ultrasonographically included i) enlargement of the suspensory ligament in a median plane (dorsopalmar (dorsoplantar) direction) and, less commonly, in a transverse plane (lateromedial direction); ii) poor definition of one or more of the margins of the suspensory ligament, especially the dorsal margin (Fig 6); iii) a well-circumscribed, central, circular hypoechoic area extending less than 1 cm proximodistally, to up to 4 cm (Fig 7); iv) one or more poorly defined hypoechoic areas, central or more peripheral, extending 1 to 3 cm proximodistally (Fig 8 a and c); v) a larger area of diffuse decrease in echogenicity involving part or all of the cross-sectional area of the ligament (Figs 9 and 10); iv) a combination of more than one of the above.

Central, circular hypoechoic lesions were most common in the forelimb (20/30), whereas in the hindlimb a diffuse decrease in echogenicity of two-thirds or more of the cross-sectional area of the ligament was the most frequent lesion (8/11). The dorsal part of the ligament was usually affected in these cases.

In the horses with unilateral lameness, lesions were only regarded as significant if, subjectively, indisputably different from the contralateral limb. A change in the ultrasonographic appearance of the lesion over a period of time was also taken as substantive evidence of the significance of a lesion. For example one horse in **Group 1,** examined four days after the onset of lameness, had an extremely subtle, poorly defined central hypoechoic lesion (Fig 8a). When re-examined four weeks later

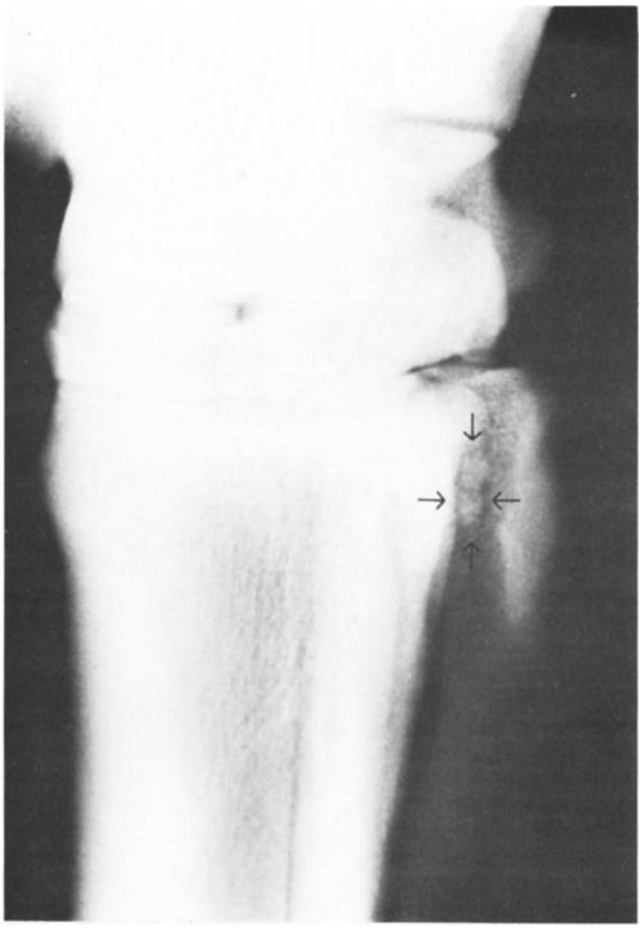

Fig 5: Lateromedial view of the proximal metatarsus. There is a large apparently discrete opacity superimposed over the small metatarsal bones (closed arrows). This represents entheseophyte formation. Note also the slightly oblique orientation of the subchondral trabeculae. This is the same horse as Fig 9

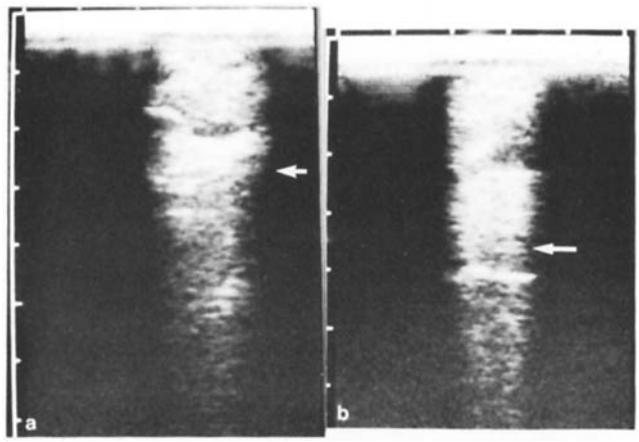

Fig 6: Transverse scans of the proximal a) metacarpus and b) metatarsus. There is an hypoechoic area involving the dorsolateral aspect of the suspensory ligament (arrow). Fig 6b is the same horse as Fig 1

the lesion was a very well defined central, circular lesion (Fig 8b).

Follow up

Follow-up data for the horses in **Group 1** are summarised in Table 4. Ten horses have resumed full work and remained sound for the duration of follow-up (3 to 30 months). Two horses, in which a lesion persisted ultrasonographically, have experienced recurrent lameness. A further five had persistent lesions and were retired or destroyed due to the chronicity and severity of the problem.

Post mortem examination of a six-year-old with bilateral hindlimb lameness revealed considerable entheseophyte formation on the plantar proximal aspects of the third metatarsal bones, sclerosis of the trabeculae in the subchondral bone and widespread, diffuse degenerative changes in the proximal

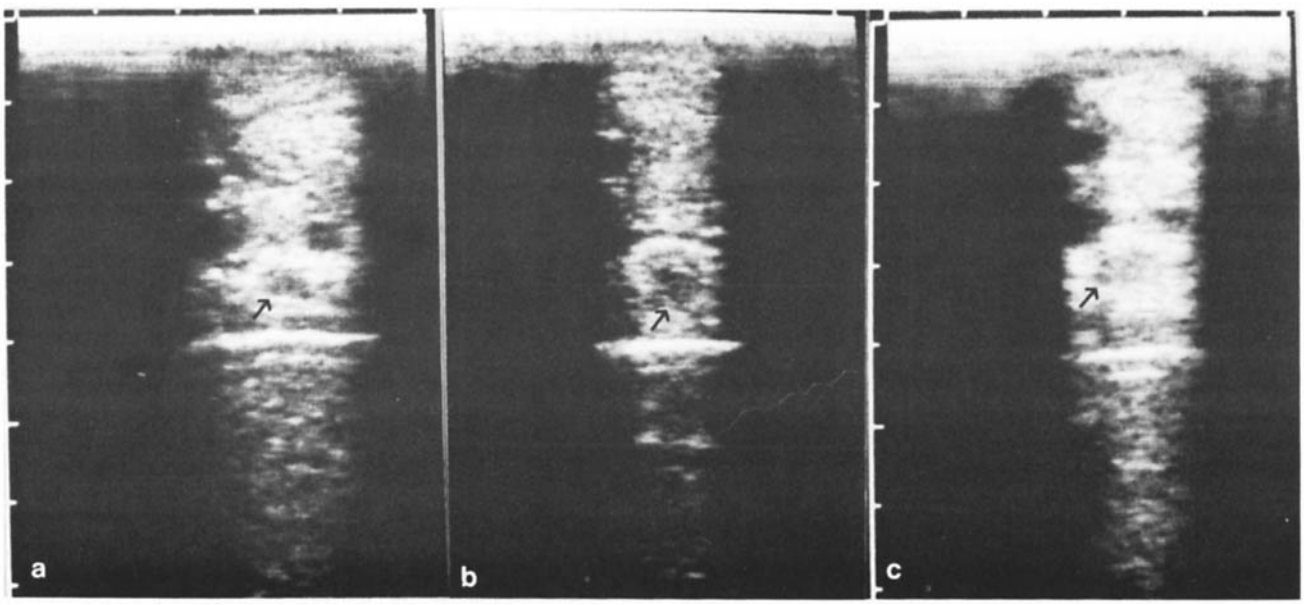

Fig 7a, b and c: transverse scans of the proximal metacarpus. There is a well defined, central hypoechoic area in the suspensory ligament (arrow) of each. In b) and c) the suspensory ligament is also enlarged in the median plane. The lesion in c) has persisted for 2 years, without associated lameness in this limb; the horse has recently developed suspensory desmitis in the contralateral limb

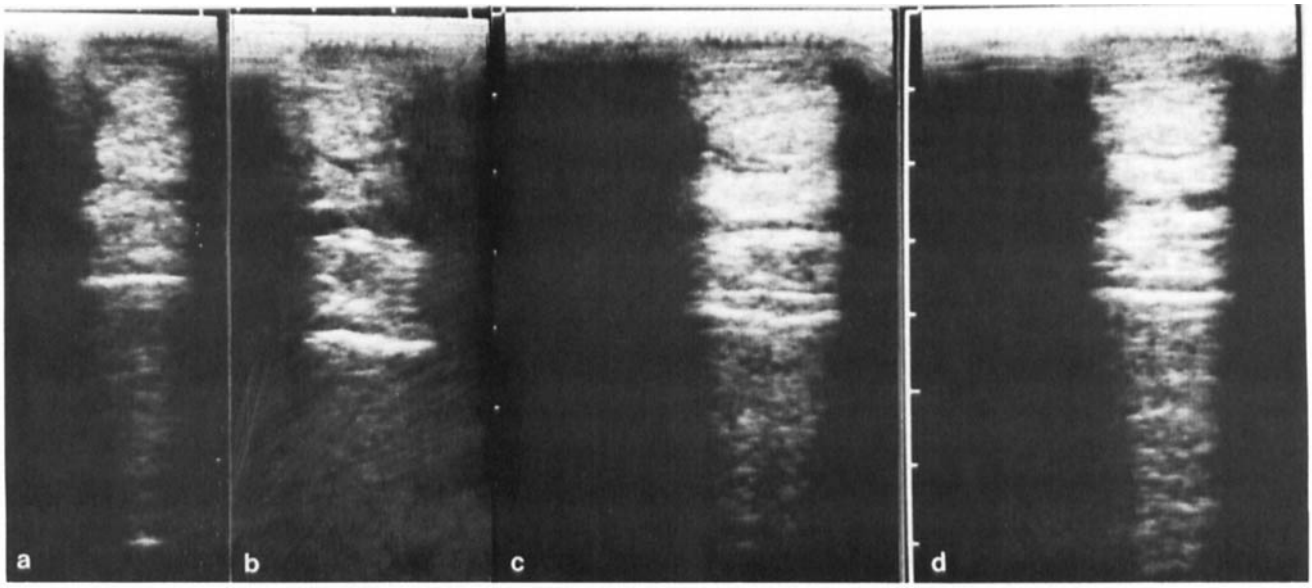

Fig 8: a) Transverse scan of the proximal metacarpus obtained 4 days after the onset of lameness. There are poorly defined hypoechoic areas within the suspensory ligament. b) The same horse after restriction to box rest for 4 weeks. A central hypoechoic lesion is clearly defined. c) Transverse scan of the proximal metacarpus, 10 days after the onset of lameness. There are poorly defined hypoechoic areas within the suspensory ligament. d) The same horse as 8c, 5 weeks later. The suspensory ligament is of much more uniform echogenicity

Fig 9: Transverse scan of the proximal metatarsus. Almost the entire cross sectional area of the suspensory ligament is hypoechoic. This is the same horse as Fig 5

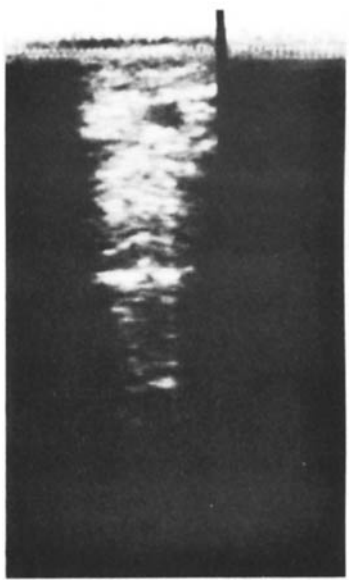

Fig 10: Transverse scan of the proximal metatarsus. The dorsal one half of the suspensory ligament is hypoechoic. This is the same horse as Fig 4

portions of the suspensory ligaments.

In nine of the 13 horses in **Group 2** the lesion was barely detectable ultrasonographically by four weeks to five months after the first examination, usually in less than 12 weeks (Fig. 8c and d). In three horses a central hypoechoic zone has persisted and has remained unchanged for the period of follow-up (18 to 24 months) (Fig 7c). All 13 horses have been in full work for the period of follow up (6 to 30 months), but two of the three horses with persistent focal defects have developed other problems: superficial digital flexor tendonitis or suspensory ligament desmitis in the contralateral limb.

Discussion

Clinical features

The suspensory ligament originates on the proximal palmar (plantar) aspect of the third metacarpal (metatarsal) bone and proximally lies between the second and fourth metacarpal (metatarsal) bones where its margins are inaccessible to palpation and appreciation of its size is difficult. In horses with acute onset lameness associated with proximal suspensory

Author's note: In order to reproduce the ultrasonographic lesions satisfactorily for publication, exposures have been used which alter the overall apparent echogenicity of some of the images compared to the originals

TABLE 4: Follow up data for horses in Group 1

Lesion resolved ultrasonographically: resumed full work	8
Resumed full work; not rescanned	2
Lesion resolved ultrasonographically; lame due to other cause	4
Lesion persisted ultrasonographically; recurrent lameness	2
Retired due to chronicity of problem	4
Humanely destroyed due to chronicity of problem	1
Follow up less than 3 months (5) or not worked for another reason (1)	6
Unknown	2

TABLE 5: An example of a controlled exercise programme for a horse with a central, focal hypoechoic zone in the proximal suspensory ligament of a forelimb

Weeks 0 - 4	15 minutes walking, twice daily
Weeks 4 - 8	20 minutes walking*, twice daily
Weeks 8 - 12	40 -60 minutes walking and trotting*
Re-scanned after 12 weeks lesion resolved ultrasonographically	
Gradually resumed full normal work	

* = ridden exercise

desmitis, localised heat, with or without distension of the medial palmar (plantar) vein, or slight localised oedema can be detected frequently. It may be possible to elicit pain by firm palpation of the palmar (plantar) medial or palmar (plantar) lateral aspect of the proximal metacarpus (metatarsus) with the limb non-weightbearing. In horses with more chronic lameness, or those that have been rested immediately after onset of lameness, there are often no localising clinical signs and local analgesia is essential to identify the source of pain.

Local analgesia

Some controversy surrounds the most effective means of desensitising the proximal palmar metacarpal region (Ford, Ross and Orsini 1988). In the method used in the current study there is a risk of injection into the capsule of the middle and carpometacarpal joints but the author suggests that using a small volume of local anaesthetic (6 ml) the risk is considerably less than implied by Ford *et al* (1988), following their experimental study using 20 ml.

Perineural anaesthesia of the lateral palmar nerve performed just distal to the accessory carpal bone (and hence the medial and lateral palmar metacarpal nerves) should avoid the possibility of inadvertent injection into the palmar outpouchings of the capsule of the middle and carpometacarpal joints. In the author's experience it is unnecessary also to block the medial palmar nerve as described by Ford *et al* (1988) because this desensitises structures distal to the principal area of interest. Theoretically, blocking the lateral palmar nerve at the level described is less specific than blocking only the palmar metacarpal nerves.

In the hindlimb, the nerve supply to the proximal metatarsal region is less well described. Although in this series of horses several horses were subjected to fibular and tibial nerve blocks, the author suggests that subtarsal analgesia is preferable for eliminating pain associated with the proximal plantar metatarsal region. This method is more specific, and in the author's experience, the response to anaesthesia is both quicker and more effective although generally lameness is improved but not fully alleviated.

Radiography

In the normal horse, the proximal subchondral bone plate of the third metacarpal and metatarsal bones is a relatively sclerotic, well demarcated band of even thickness. The regular trabecular pattern of the underlying cancellous bone is orientated in a proximodistal direction. A variable number of small lucent zones, representing nutrient foramina, may be seen distal to the subchondral bone plate. In some clinically normal horses in the centre of a dorsoplantar projection of the proximal metatarsus there is a narrow relatively sclerotic line, extending in a proximodistal direction (unpublished observation). This correlates with a ridge of bone on the plantar cortex. Whether this is strictly normal or reflects modelling of the bone in the region where the two heads of the suspensory ligament converge, remains open to question.

There have been limited descriptions of the radiographic changes associated with proximal suspensory desmitis. Radiographic abnormalities are rarely seen in acute proximal suspensory desmitis unless lameness represents recurrence of a previous injury. Marks *et al* (1981) described increased vascular channels in the proximal metacarpal region; Stashak (1987) mentioned a periostitis and Huskamp and Nowak (1988) described enthesopathy of the proximal palmar aspect of the third metacarpal bone. Increased trabecular opacity may best be demonstrated on an overexposed lateromedial view (Dik and Gunsser 1989).

In this series of horses, radiographic abnormalities occurred more frequently and were more extensive in cases of hind limb proximal suspensory desmitis than in the forelimb, and appeared to warrant a more guarded prognosis for sustained future soundness. However this may be related to the type of suspensory ligament injury and its chronicity. Ultrasonographically there was a higher incidence of diffuse areas of decreased echogenicity, as opposed to central core lesions, in the hindlimb versus the forelimb. Lameness was generally of longer duration in those horses presented with hindlimb lameness.

Apparent sclerosis seen in a dorsopalmar (dorsoplantar) view may represent sclerosis of the trabeculae and/or entheseophyte formation on the palmar (plantar) aspect of the bone. It should be differentiated from sclerosis associated with a palmar cortical fatigue fracture (Dyson 1988; Lloyd *et al* 1988; Ross *et al* 1988). If entheseophyte formation is extensive, it may also be seen in a lateromedial view as an opacity on the palmar (plantar) aspect of the bone superimposed on the second and/or fourth metacarpal (metatarsal) bones.

In the normal horse, in the lateromedial view, the trabeculae in the subchondral bone on the palmar (plantar) aspect of the third metacarpal (metatarsal) bone are aligned in a proximodistal direction; in association with proximal suspensory desmitis the trabeculae may be more obliquely orientated and coarser, with or without sclerosis.

The relationship between palmar cortical fatigue fractures and proximal suspensory desmitis has been questioned (Dyson 1988). None of the horses in this series had definitive radiographic evidence of a fracture. During the period of study, seven horses with palmar cortical fatigue fractures were evaluated, none of which demonstrated ultrasonographic evidence of proximal suspensory desmitis, although one has developed suspensory ligament desmitis two years later.

Ultrasonography

The ultrasonographic appearance of the suspensory ligament reflects its structure which comprises dense white connective tissue, striated muscle, adipose tissue and vessels (Hauser and Rantanen 1983). The size and shape of the suspensory ligament in the forelimb and hindlimb are different. In the forelimb, the proximal suspensory ligament is approximately rectangular in cross section but it is more rounded in the hindlimb and is relatively bigger in the median plane.

In the forelimb the most proximal part of the suspensory ligament sometimes appears to be in dorsal and palmar halves, slightly separated by a less echoic region, which should not be confused as a lesion (unpublished observations). In some horses there is a focal central hypoechoic area, extending up to 1 cm proximodistally, similar to the central lesion described previously (Fig 7a). This does not change in appearance with time and is usually bilateral. It occurred as an incidental, static finding in 6 per cent of 144 horses examined ultrasonographically by the author between July 1986 and December 1987, most of which were subject to follow up examination over a period of 12 to 24 months.

In view of this, interpretation of a suspected lesion must be made in the light of clinical signs and response to local anaesthesia. It is sometimes useful to re-scan the horse after two to four weeks to assess any change in a suspected lesion.

To evaluate the overall echogenicity of the suspensory ligament, it is important that the limb has been adequately prepared and appropriate gain controls are used. Poor contact between the transducer and the limb due to inadequate clipping, scabs or skin debris, insufficient coupling gel, incorrect positioning of the transducer or too low a setting for the far gain control may result in an impression of decreased echogenicity of the suspensory ligament relative to the more palmar (plantar) structures. If either the overall gain or the far gain control is too high, a lesion may be overlooked.

The shape and size of the suspensory ligament, the definition of its margins and its overall echogenicity should be assessed carefully and compared with the contralateral limb. In the author's experience most information is gained from a transverse scan, but the presence of a lesion may be confirmed in a longitudinal scan. In a longitudinal scan of a normal horse the most proximal part of the suspensory ligament where it attaches to the third metacarpal (metatarsal) bone appears less echogenic than further distally and this should not be confused with a lesion.

The rate of ultrasonographic resolution of a lesion is variable and appears, in part, to relate to the chronicity of the lesion prior to institution of appropriate management. Lesions identified soon after onset of lameness appeared to 'heal' more quickly than longer standing lesions. Central hypoechoic lesions gradually decreased in size, became more echogenic and, in some cases, ultimately had a relatively hyperechoic centre. In a small proportion of horses a central hypoechoic defect persisted; there was a higher rate of recurrent lameness in these horses than in horses in which a central focal lesion apparently resolved. Large diffuse areas of reduced echogenicity were seen more commonly in hindlimbs than forelimbs, tended to persist long term and be associated with recurrent lameness. It is not possible to predict whether these lesions may ultimately have resolved given longer rest.

Response to treatment

The results of treatment of a series of horses in which the diagnosis of proximal suspensory desmitis was made ultrasonographically has not been documented. Personett *et al* (1983) treated 11 horses with proximal suspensory desmitis of the forelimb diagnosed clinically, but not ultrasonographically, by box rest for eight weeks and claimed a 91 per cent success rate. A further 22 horses also received local injections of betamethasone, with a 77 per cent success rate. The duration of follow up was not stated. Selway (1982) suggested that treatment of proximal suspensory desmitis was frustrating due to the high rate of recurrence but then claimed a 'less than 2 per cent recurrence' in a series of 400 cases over a four month follow up period, after treatment by rest and local cortiscosteroid injection. Marks *et al* (1981) advocated the use of an internal blister combined with a graduated work programme but presented no data to document the efficacy of treatment.

The horses in the current series were treated by box rest and controlled exercise (Table 5), the duration of rest being governed largely by the ultrasonographic progress of the lesion, varying from four weeks to nine months. Twenty-five of 29 horses (86 per cent) with proximal suspensory desmitis unassociated with any concurrent cause of lameness, with follow up of more than three months, resumed full work and the majority have not experienced recurrent lameness associated with proximal suspensory desmitis in the follow up period (3 to 30 months).

Prognosis for sustained future soundness was best if radiographic abnormalities were absent or mild, and if the lesion, identified ultrasonographically, resolved. The prognosis was generally poorer in horses with hindlimb lameness, where lameness was of longer duration, there was a higher incidence of more severe radiographic abnormalities and larger, more diffuse lesions were identified ultrasonographically.

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