



VETCT
CONSULTANTS IN TELEMEDICINE

IT'S YOUR CASE

Species: Equine

Breed: Thoroughbred

Sex: Gelding Age: 12 years

Clinical History:

12 year old thoroughbred gelding. Acute onset grade 3/5 right forelimb lameness

Anatomic regions: Front feet / pastern (right)

Details of study and technical comments: Lateromedial, flexed lateromedial, Dorsopalmar and Dorsal60Proximal-Palmarodistal oblique views of the right fore foot. Images are of good diagnostic quality.

Diagnostic interpretation:

A complete, articular, dorsally displaced, fracture of the extensor process of the distal phalanx is present. This creates a large triangular shape fragment that is separated from the extensor process of the distal phalanx, measuring 13mm (maximal dorso-palmar depth) x 12 mm (height). The fracture involves the entire mediolateral width of the extensor process. The fragment is moderately displaced dorsally with a step at the articular margin of 2.6mm. There is no alteration of the position of the fracture during limb flexion. The fracture line is well-defined and slightly irregular and the fracture fragment and adjacent distal phalanx have normal opacity consistent with recent trauma. There is moderate thickening of the soft tissues on the dorsal aspect of the middle phalanx consistent with distal interphalangeal joint effusion.

A lucent line is present at the dorsal aspect of the solar margin of the distal phalanx separating a thin portion of bone for a mediolateral width of approximately 33mm. There is no evidence of reaction in the adjacent distal phalanx.

At the dorsodistal aspect of the middle phalanx there is a small well-defined spur of periarticular new bone.

There is normal orientation of the dorsal hoof wall. There is a neutral palmar angle of the distal phalanx, with a palmar angle measuring 1 degree. The toe is slightly long.

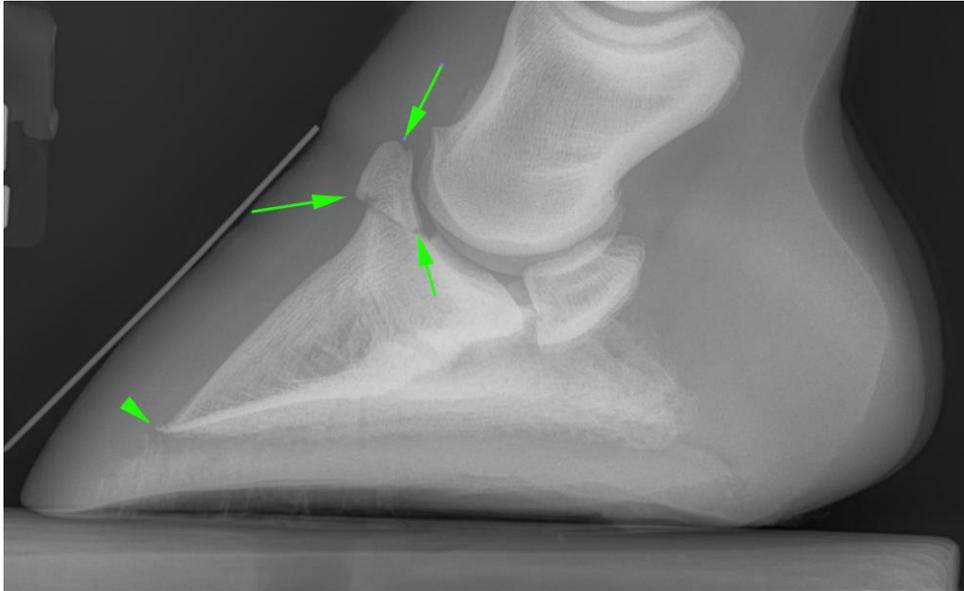


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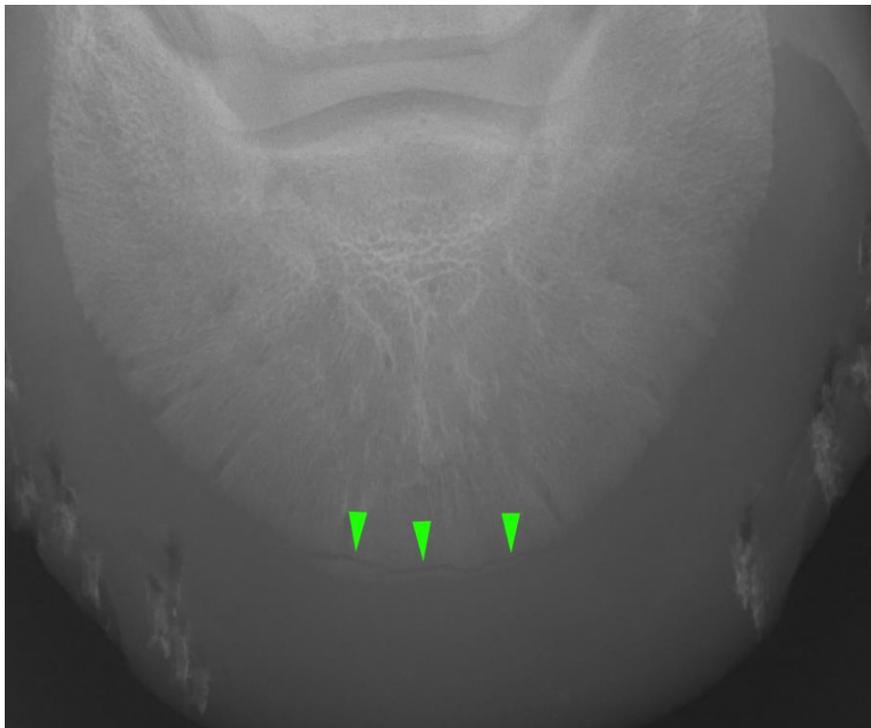
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LM view showing the large separate fragment involving extensor process of the distal phalanx (Arrows) and the small solar margin fracture (arrowhead).



DPrPaDiO view showing the fracture of the solar margin of the distal phalanx.

Conclusions:

- Large displaced articular fracture of the extensor process of the distal phalanx (Type IV)
- Solar margin fracture of the distal phalanx at the toe (Type VI)
- Mild modelling of the dorsodistal aspect of the middle phalanx, likely representing mild osteoarthritis.



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- Poor foot balance

Additional comments:

The fracture of the extensor process of the distal phalanx is recent in origin, likely due to trauma, and involves a large portion of the articular surface of the distal interphalangeal joint.

The clinical significance of the solar margin fracture needs to be correlated with the clinical signs. This is considered likely to be related to the recent traumatic incident. These fragments are sometimes associated with laminitis although there are no signs of laminar pathology in this case.

Teaching points

The fracture margins are sharply demarcated and regular in outline, which likely demarcates an acute fracture. This is further supported by the history of acute onset lameness.

The classification of fractures in the distal phalanx is well-established. For a review of fracture types please see the reference below.

Don't forget to assess the soft tissues. The dorsal pouch of the distal interphalangeal joint is located just proximal to the coronary band - sometimes swelling of this region can indicate effusion of the distal interphalangeal joint. There is no obvious external sign of effusion in this case.

It is unlikely that the two types of fracture seen in the foot have different aetiology, however it cannot be ruled out. As is pointed out in the additional comments section, these can be associated with laminitis, but there is no evidence of laminar pathology in this case.

Further reading

Kidd J, 2011 Pedal bone fractures *Equine Veterinary Education* **23**(6) pp314-323



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