

Radiographic, scintigraphic and magnetic resonance imaging findings in the palmar processes of the distal phalanx

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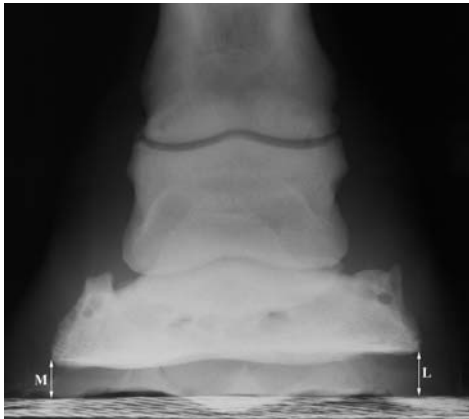


Fig o1: Mediolateral orientation of the distal phalanx was determined from a dorsopalmar radiographic view. Two perpendicular lines were drawn between the most medial and lateral aspects of the distal phalanx and the horizontal ground surface. The medial distance ($M = 13$ mm) was smaller than the lateral ($L = 15$ mm).



Fig o2: Solar thickness was measured on a lateromedial radiographic view. A perpendicular line was drawn from the most palmar aspect of the extensor process of the distal phalanx to the sole (A). The distance between the solar surface of the distal phalanx and the sole was also measured (B). Ratio B:A (solar thickness ratio) was calculated. In this 6-year-old dressage horse the solar thickness ratio was 0.12, which was relatively small (mean 0.18 ± 0.04 for all feet).

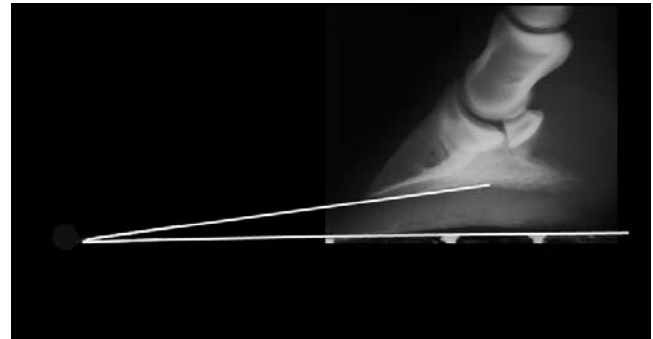


Fig o3: Dorsopalmar orientation of the distal phalanx was determined by measuring the angle between the solar surface of the distal phalanx and the ground surface. Note the modelling on the ventral aspect of the palmar processes.

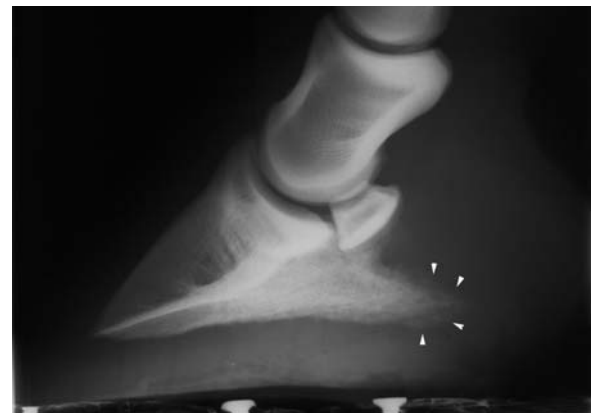


Fig o4: Lateromedial radiographic view of the right front foot of a 9-year-old Irish Draught hunter. The palmar aspects of the palmar processes are markedly irregular (arrowheads).

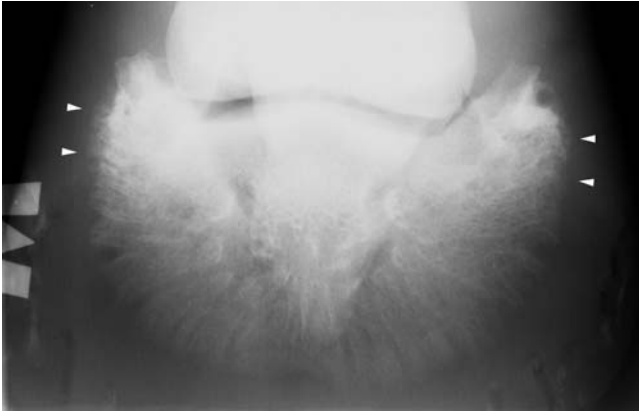


Fig 05: Dorsoproximal-palmarodistal oblique radiographic view of the left front foot of a 7-year-old Irish Draught mare. Medial is to the left. There is marked cortical irregularity at the abaxial aspects of the palmar processes of the distal phalanx (arrowheads), especially medially.



Fig 08: Dorsomedial-palmarolateral oblique radiographic view of the right front foot of a 10-year old eventer. There is a separate centre of ossification palmar of the lateral palmar process of the distal phalanx (arrowheads).

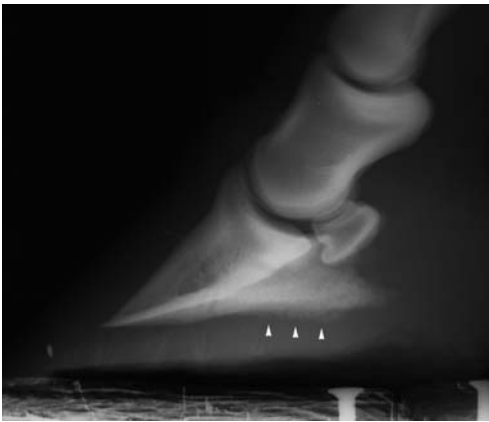


Fig 06: Lateromedial radiographic view of the left front foot of a 5-year-old Thoroughbred. There is new bone formation on the ventral aspect of the palmar processes of the distal phalanx (arrowheads).

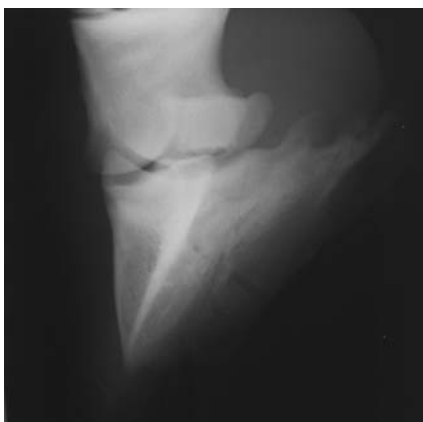


Fig 07: Dorsomedial-palmarolateral oblique radiographic view of the right front foot of an 11-year-old showjumper. The medial palmar process is elongated.

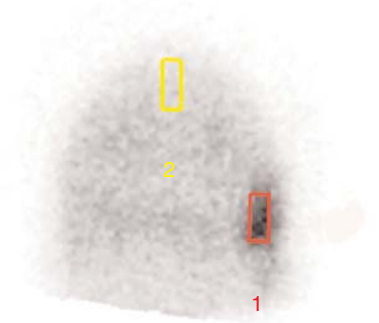


Fig 09: Intensity of increased radiopharmaceutical uptake was determined on the solar scintigraphic image, using region of interest analysis (ROI). Medial is to the right. There is focal increased radiopharmaceutical uptake (IRU) in the medial palmar process of the distal phalanx. A ROI was drawn within the confines of the area of IRU, occupying as large an area as possible (ROI 1, mean counts/pixel 71.8 ± 13.7). Region of interest 1 (red) was copied and moved to the midline of the dorsal toe region (ROI 2 [yellow], mean counts per pixel 23.4 ± 5.28). The mean counts per pixel was 200% more in ROI 1 compared to the reference ROI 2, therefore IRU was graded intense (intense if difference $>40\%$).

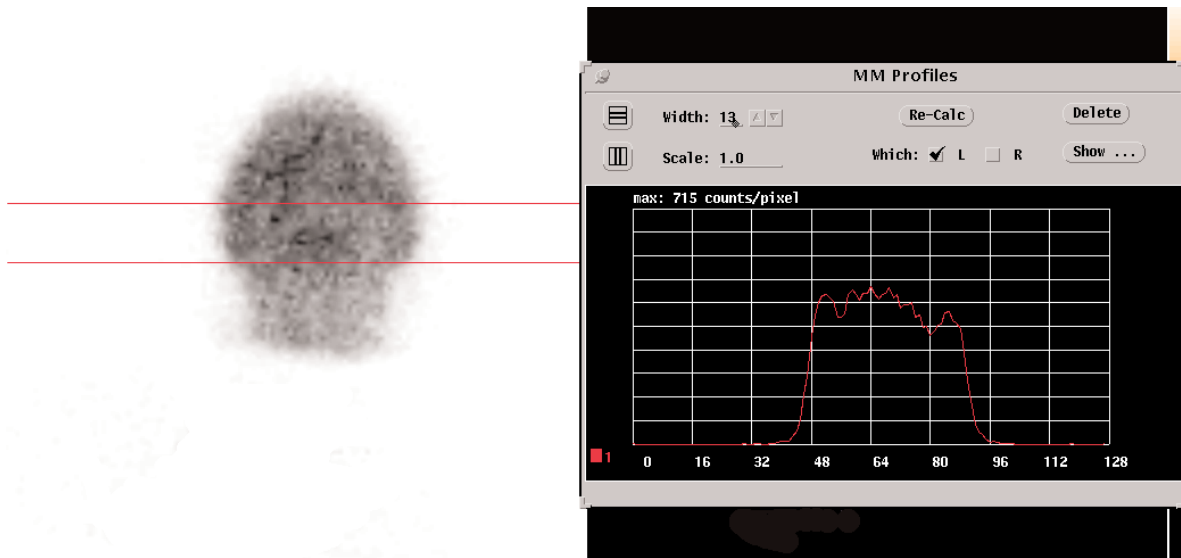


Fig o10: Profile analysis of a solar scintigraphic image of the left front foot of a 12-year-old Connemara gelding. Medial is to the left. There is generalised greater radiopharmaceutical uptake in the medial palmar process of the distal phalanx than in the lateral palmar process.

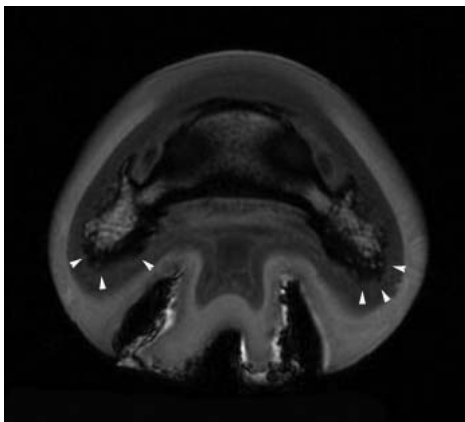


Fig o11: Transverse 3D T1-weighted SPGR image of the left front foot of a 9-year-old Irish Draught hunter. Medial is to the left. There is marked cortical irregularity of the palmar processes with decreased signal intensity at the axial and palmar aspects (arrowheads).

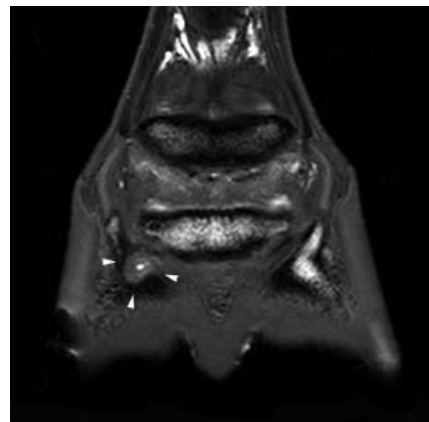


Fig o13: Dorsal 3D T2* GRE image of the left front foot of a 4-year-old Thoroughbred. Medial is to the left. There is an area of increased signal intensity in the axial aspect of the medial palmar process (arrowheads) with very bright signal intensity centrally. This is an osseous cyst-like lesion. The remaining part of the palmar process has decreased signal intensity.

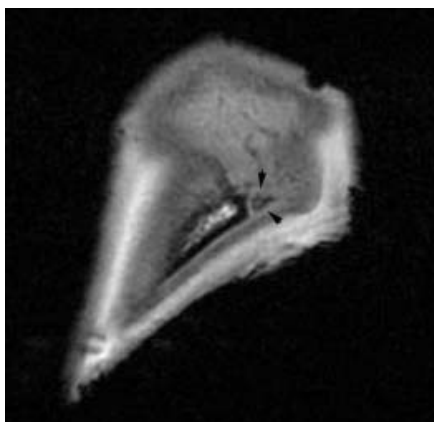


Fig o12: Parasagittal 3D T1-weighted SPGR image of the right front foot of a 7-year-old Large Native pony. There is a separate centre of ossification palmar to the lateral palmar process of the distal phalanx (arrowheads).