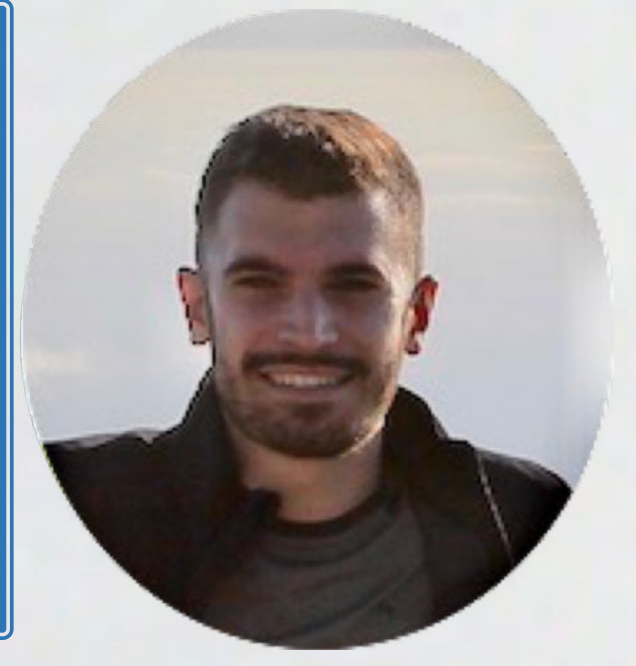


COMPUTED TOMOGRAPHIC DIAGNOSIS OF FRACTURE OF THE CAUDAL BRANCH OF THE PUBIS IN A THROUGHbred FOAL

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INTRODUCTION

In horses, hindlimb lameness caused by pelvic fractures is far more common than previously documented. Actually, radiography, ultrasonography, computed tomography (CT) and nuclear scintigraphy are the most commonly used imaging modalities for their diagnosis [1]. However, CT can be a very effective diagnostic aid in foals [2]. The aim of this report is to describe the clinical and diagnostic imaging findings in a 15 days old Thoroughbred foal, with fracture of the left pubis, presented at our VTH for a left hindlimb lameness of 8 days duration.

CASE DESCRIPTION

Clinical findings

At admission, the foal was bright and alert and in good body condition; the patient showed severe left hindlimb lameness at walk and at trot in straight line under the mare. No swellings in any part of the limb were founded and only a mild bilateral curby conformation of the hocks was identified.

Clinical course and diagnostic procedures

Haematological and biochemistry analyses showed hypochromic normocytic anaemia, increased serum amyloid A and fibrinogen. A radiographic screening of the left hindlimb from the foot to the stifle was considered unremarkable as well as ultrasonographic examinations of the pelvis and umbilicus; small and diffuse comet tail artefacts in the cranial portion of the lungs were identified. Considering the risk for presence of occult infection on the base of blood works and age of the foal, a CT examination of the pelvis and hindlimbs was performed under general anaesthesia. CT examination showed a simple slightly displaced fracture involving the caudal branch of the left pubis (Figure 1); no changes consistent with a septic process were founded. The foal was restricted to box-rest for 3 weeks and a small paddock for additional 3 weeks. At 3 years follow-up by telephone interview with the trainer, the horse is in full athletic activity and there are no residual gait changes related to the fracture of the pubis.

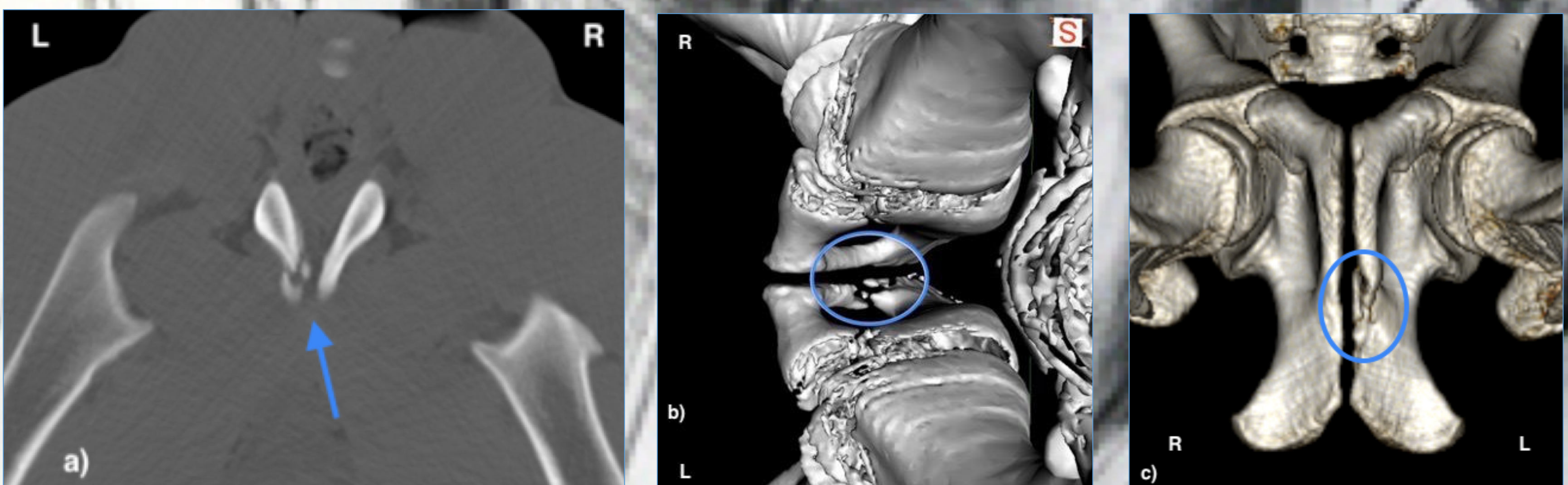


Figure 1. Transverse plane (a), surface rendering (b) and volume rendering (c) CT images of the pelvis showing bone fragmentation at the level of the caudal branch of the left pubis consistent with a slightly displaced fracture.

DISCUSSION AND CONCLUSIONS

In the case presented here, CT examination was extremely useful to detect the fracture of the left pubis, which was impossible to identify through the standard transcutaneous ultrasound examination. CT examination revealed the exact configuration of the fracture of the caudal branch of the left pubis, allowing a correct diagnosis to establish the more appropriate treatment and prognosis. One disadvantage of CT is the increased cost, which may be considered acceptable in specific cases to get an early diagnosis and avoid delay in appropriate treatment or decision for euthanasia in foals [3,4].

In conclusion, CT examination is a valid diagnostic tool that allows to detect pelvic fractures due to its sensitivity; in this particular case, CT allowed to identify the cause of the lameness and to rule out the presence of a septic process, which is a major problem in young foals with severe lameness. The equine practitioners should not overlook the pelvis as a possible site of fractures in cases of acute onset of hindlimb lameness in foals. The use of advanced diagnostic imaging techniques, as CT, is recommended when ultrasonographic and radiographic examinations of the pelvis are unremarkable.

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