"COUNTS" REALLY "COUNT"?

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Bone scintigraphy is widely applied in Veterinary Medicine, especially in equine patients. Its usefulness is strictly correlated to the knowledge of its added value but also the recognition of its limits. A complete clinical investigation based on orthopaedic evaluation and diagnostic analgesia still remains paramount for a correct localization of the lameness.

The aim of this retrospective study was to evaluate in which clinical cases the scintigraphic examination is mandatory for a certain diagnosis and, in the other hand, in which horses the scintigraphic findings could have a poor diagnostic value or mislead the diagnosis. Images obtained form Radiographic and Magnetic Resonance (MRI) examination were correlated with clinical and scintigraphic findings in order to evaluate the diagnostic capability of scintigraphic examination in different body region and define guidelines for the exam requests for the reverring veterinarian surgeons.

All horses included in the study underwent bone scinthigraphy, MRI and/or radiographic examination. Scintigraphic findings were cross-referenced with other imaging modalities and patient clinical data were evaluated.

Thirty-one horses (20 lame horses and 11 affected by poor performance) had been included in this study. Twenty horses underwent scintigraphy and radiography, four horses underwent scintigraphy and MRI and seven horses underwent scintigraphy, radiography and MRI. Eighteen horses underwent total body bone scan while in five horses the study focused on one anatomical region (i.e. forelimbs) and in eight horses images from two regions (i.e. forelimbs and neck) were obtained.

Only in 6 horses scintigraphy was able to show pathological findings ascribable to a correct and definitive diagnosis. In these horses, the lesions involved the origin of the suspensory ligament, the sacro-iliac joint, the coxo-femoral joint and the navicular bone. In 14 horses bone scintigraphy identify the localization of lameness but not the cause and, in 10/14 cases the combined use of different imaging modalities permitted to reach the final diagnosis. In 11 horses,scintigraphic examination revealed findings of ambiguous clinical interest but, because of the referring veterinarian surgeon did not perform the dignostic blocks, nor the localization neither the cause of the lameness were identifiyed.

As in literature also in this study scintigraphic examination alone was able to lead to a definitive diagnosis in which sacro-iliac and coxo-femoral joint were involved. In horses with suspensory ligament and navicular bone pathology scintigraphy shows high sensibility and good accuracy but MRI provides relevant informations both for treatment and prognosis. In most cases scintigraphy should be considered as a part of a diagnostic process due to the poor specificity. Often ambiguous findings were detected during scintigraphyc examination to wich it was not possible to attribute a clinical relevance due to a lack of anamnestic data. Nevertheless, sensibility and specificity can be increased by a complete and detailed orthopedic evaluation.

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