

Findings consistent with equine proximal suspensory desmitis can be reliably detected using computed tomography and differ between affected horses and controls

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Products

Computed Tomography (CT) for proximal suspensory ligament (PSL) assessment in horses.

Hospital / Authors

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Clinical Background

Proximal suspensory desmitis (PSD) is a common condition in sport horses, characterized by ligament enlargement, osseous changes, and potential nerve irritation. CT imaging offers precise detection and assessment of PSD where MRI is unavailable.

Aim of Study

To evaluate CT imaging findings in the proximoplantar metatarsal III region of horses with and without PSD, analyzing ligament enlargement, mineralization, and osseous changes.

Cohort Study

CT and radiographic evaluations were performed on 40 horses (20 with PSD and 20 controls). Images were analyzed by three independent observers, with intra- and interobserver reliability assessed.

Results

- CT detected significantly more abnormalities in PSD horses, including osseous exostosis, PSL enlargement, and mineralization.
- PSL thickness and area were consistently larger in PSD horses, with dorsoplantar thickness >17.39 mm exclusive to affected horses.
- Intraobserver agreement was high (ICC 0.82-1.0), with moderate interobserver reliability for detecting ligament enlargement and osseous changes.
- CT imaging highlighted osseous spurs, mineralization, and ligament avulsions often missed on radiographs, underscoring its diagnostic superiority.

Summary

- CT reliably identifies osseous proliferation, sclerosis, and soft tissue enlargement in PSD, making it a valuable diagnostic tool.
- Observed PSL enlargement supports the theory of **compartment syndrome**, causing plantar nerve irritation.
- CT surpasses radiographs in detecting mineralization, avulsion fragments, and osseous changes for early PSD diagnosis.
- This study reinforces CT as a practical alternative to MRI for PSD evaluation in horses, particularly when MRI is unavailable.

<u>Link to paper</u>