

## 9. Summary

Examination of primary and secondary disease of the palmar or plantar annular ligament of fetlock in the horse

Horses submitted to the Clinic of Equine, General Radiology and Surgery of the Free University of Berlin or to the Equine Clinic Dr. Meyer-Wilmes in Steinhagen because of a disease of the fetlock annular ligament were studied for the purpose of the present work. The purpose of this study was to find out if there are primary diseases of the fetlock annular ligament or if they are the consequence of tendon injuries.

The horses were classified into two groups:

- 1) A retrospective group of horses consisting of 35 horses that were presented between 1995 and 2003 to the Clinic of Equine, General Radiology and Surgery of the Free University of Berlin and that were treated because of a disease of the fetlock annular ligament.
- 2) A prospective group of 20 horses that were presented at the Clinic of Equine, General Radiology and Surgery of the Free University of Berlin or to the Equine Clinic Dr. Meyer-Wilmes in Steinhagen that were being treated because of a disease of the fetlock annular ligament.

The following conclusions could be drawn after having studied both groups:

- A primary disease of the fetlock annular ligament was diagnosed in horses of both groups.
- A high number of horses with typical radiological findings of the proximal sesamoid bones was observed in both groups.
- The prevalence of warmblood horses with a diagnosis of diseased fetlock annular ligament was higher than of horses of other breeds. The reason for this is probably the fact that both clinics have mainly warmblood horses as patients.
- The average age in the retrospective group was 10,1 years, while the average of the clinical group was 12,4.
- Conservative therapeutical methods were applied to the majority of horses of both groups.

- The prevalence of male horses with a positive diagnose of disease of the fetlock annular ligament within the retrospective group was higher compared to females. On the other hand, males and females were equally affected in the clinical group.
- Both groups showed a frequent compromise of the superficial digital flexor tendon in horses suffering of secondary thickness of the fetlock annular ligament.
- No correlation was found between the thickness of the fetlock annular ligament and the cause of lameness in the clinical group.
- Contour abnormalities together with osteolytical defects of the fetlock annular ligament of the fore limbs were diagnosed in both groups.

In the third part of the work 14 sound horses were studied. A radiological examination was carried out on one fore limb and one hind limb from contra-lateral sides in every horse to asses the state of the proximal sesamoid bones.

The thickness of the PAL was measured with an ultrasound. The results of this examination showed that the PAL of the forelimbs was thinner than in the hindlimbs in 13 of the 14 horse. Only in one horse the PAL showed in the fore and hindlimb the same thickness.

Latero-medial and medio-lateral oblique X-rays were taken for the examination of the proximal sesamoid bones in order to assess its bone structure and contour. No pathological changes in its bone structure and contour as well were seen at the same time in a horse. However there was a high number of horses with pathological changes in the proximal sesamoid bones, just like in the first two groups of this work.