

## 7 Summary

### **“Radiographic examination regarding osteochondrosis in the fetlock, hock and stifle joint in two-year-old warmbloods (a follow-up study)”**

The present study is part of an interdisciplinary research project. Its aim is to present more information about a presumably multifactorial caused disease called osteochondrosis dissecans (OCD). To serve this purpose several teams were assembled. The present team x-rayed warmblood foals, their mothers and the foals at the age of two years.

During this study 405 two-year old warmblood horses were x-rayed. The same horses have been x-rayed as yearlings in 2001. In total eight radiographs of the fetlock, hock and stifle joints were taken. The goal of this study was to analyse the radiographic findings of the two-year-olds and to compare the findings that were taken two years earlier. Finally a comparison between these findings and the osteochondrotic changes of the dams was made.

In total 32,6% of 405 foals examined osteochondrotic changes in the fetlock, hock and stifle joint. As two year olds 26,2% of these horses showed changes.

In the fetlock joint 99 foals (24,5%) and 111 two-year-olds (27,7%) showed osteochondrotic changes and/or joint bodies of different causes. Female horses were more often affected in the fetlock joint than male horses. There was a slight decrease in osteochondrotic changes dorsally at the sagittal ridge. In addition 20% of the affected two-year-olds developed osteochondrosis dissecans (with bony fragments) which two years ago, was diagnosed as osteochondrosis, 14,6% developed osteochondrosis which formerly was an osteochondrosis dissecans and 29,2% showed no changes. In conclusion the majority of radiographic findings was already diagnosed when the horses were foals. It is also detected that osteochondrosis can become osteochondrosis dissecans or vice versa. There was a distinct increase in bony fragments at the dorsal and palmar/plantar aspect of P1. This indicates that most of the bony fragments developed when the horses were not foals anymore.

In the hock joint 45 (11,1%) horses showed as foals and 42 (10,4%) as two-year-olds osteochondrotic lesions. Male horses were more often affected than female horses. The total of affected horses hardly changed, however almost half of the two-year-olds, who showed osteochondrosis dissecans developed this out of Osteochondrosis (no bony fragments). The other half of the horse showed osteochondrosis dissecans already when they were foals.

In the stifle joint 29 foals (7,2%) and 9 two-year-olds (1,9%) showed osteochondrotic lesions. No bony fragments could be demonstrated when the horses were x-rayed as foals. 72,4% of osteochondrotic changes that have been diagnosed at weaning age could not be

demonstrated when these horses were x-rayed two years later. Thus the frequency of osteochondrotic changes depended upon the age of the horse.

The comparison of the findings with their dam's findings showed that mares with osteochondrotic changes had more often descendants with osteochondrotic changes.

These results are proceeded to the other teams of this interdisciplinary project.