Degenerative lumbosacral stenosis (DLSS) entails a variety of spinal and neurological symptoms ranging from lower back pain to severe dysfunction of the cauda equina. Currently, the pathophysiology is not fully understood. Based upon the increased occurrence in certain breeds of working dogs, a combination of hereditary predisposition and early degeneration of lumbosacral disc, articular facets and vertebral bodies induced by a high level of physical activity are likely to play a key role in the etiology of the disease. Recently, high levels of inflammatory cytokines have been demonstrated in specimens of human degenerated discs. There is evidence that this inflammation induces degenerative changes in the disc, the adjacent bony tissue and possibly the nerves. The introduction of advanced diagnostic tools such as magnetic resonance imaging, allows early recognition of many of these alterations by a non-invasive method. The results of this evaluation may be used for breeding decisions in affected breeds. Future investigations are intended to demonstrate the role of cytokines in the canine disc and to develop alternative methods of treatment such as more minimally invasive decompressive procedures, replacement of the lumbosacral disc and/or a method of stabilisation of the lumbosacral area.

Current projects include:
1) Follow-up examinations in dogs treated with transarticular stabilization of the lumbosacral facet joints using neurological examination and dynamic CT-studies
2) Retrospective study on dogs with disseminated idopathic skeletal hyperostosis: clinical, radiological and magnetic resonance imaging findings.

Publications / Publikationen
and radiographic findings in working German Shepherd Dogs with and without degenerative lumbosacral stenosis. J Am Vet Med Assoc 231:

Keywords / Suchbegriffe
Dog, degenerative lumbosacral stenosis, cauda equina syndrome, pathophysiology, treatment modalities

Project Leadership and Contacts / Projektleitung und Kontakte
Dr. F. Steffen (Project Leader)  fsteffen@vetclinics.uzh.ch

Funding Source(s) / Unterstützt durch
Others

Duration of Project / Projektdauer
Aug 2002 to Jul 2009