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Therapeutic chemonucleolysis of the lumbosacral disk in a cadaveric model: lateral vs sternal technique.

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Abstract

The widespread use of advanced Imaging techniques has dramatically improved the diagnosis of cauda equina syndrome in geriatric small animal patients. Two different techniques (sternal vs lateral recumbency) were tested in twelve cadavers for the L7-S1 disk injection under fluoroscopic guidance. Twelve dogs were enrolled in the study: eight intervertebral lumbosacral disks were injected with a gelatinous radiopaque compound and the remnants four disks with an alcoholic radiopaque solution. The dogs were randomly positioned either in lateral recumbency with the lumbo-sacral joint in neutral position (six dogs), or in sternal recumbency with the hind limbs extended cranially along the body and the lumbosacral joint flexed (six dogs). The correct injection of the compounds within the lumbosacral disk was checked both by computed tomography (CT) and gross anatomic examination. The lateral technique required less time of execution and minor attempts for the correct positioning of the needle. All the injected disks were visible on CT, while necroscopy resulted satisfactory only in five patients. Leakage of the compounds outside the disk was observed in two cases. The percutaneous injection in lateral recumbency under fluoroscopic guidance resulted rapid and feasible in a cadaveric model. Future clinical trials are required to assess the safety of chemonucleolysis in diseased patients.

References

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