



Oral Presentation

Stabilization of carpal and tarsal joint instability in cats and dogs using butterfly-shaped external fixation

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Abstract

Purpose: With this study, it is aimed to contribute to the literature by sharing the joint stabilization provided by the closed approach external fixation method and the successful results of this in carpal and tarsal joint injuries, which are frequently seen in cats and dogs. **Introduction:** Carpal-tarsal joint injuries in cats and dogs mostly occur as a result of damage such as jumping/falling from a height, direct trauma, and traffic accidents. Proximal intertarsal and tarsometatarsal luxations occur as a result of damage to the plantar and collateral ligaments in the tarsal joint. In the carpal joint, instability is seen due to palmar ligament and intra-articular fractures or dislocations. In addition, joint damage may occur as a result of intra-articular fractures and metacarpal/metatarsal fractures. Diagnosis is based on palpation of joint laxity and stress radiography. Treatment is conservative or operative. Splint bandage application is used in conservative treatment. Arthrodesis or internal immobilization is applied as operative treatment. **Material and Methods:** The cases consisted of 2 dogs and 6 cats, aged 2 to 8 years, brought to Istanbul University Faculty of Veterinary Surgery, Department of Surgery between 2021-2022. The patients applied to the clinic with complaints of non-weight bearing lameness and swelling in the extremities. On clinical examination and radiography, tarsometatarsal luxation in 3 cats and 2 dogs, intercarpal luxation in 2 cats and bilateral antebrachio-carpal luxation in 1 cat were detected. The relevant joint was stabilized using Kirschner pins of various thicknesses according to the bone structure of the patients. Afterwards, the pins were bent and formed into a butterfly shape, and then bound with thermoplastic material (vetlite). **Results:** After the controls at the 2nd month in 3 cases and at the 3rd month in 5 cases, joint stabilization was determined. While major complications were not observed in any of the cases, minor complications were detected in 2 cases. **Conclusion:** Successful results have been obtained with the use of butterfly type external as a minimally invasive and economical technique in carpal and tarsal joint traumas.

Keywords: carpal joint, tarsal joint, luxation, instability, external fixation

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