



For Metacarpal & Metatarsal Injury, Is Surgery Best?

Conservative treatment for metacarpal and metatarsal fractures is typically indicated for mildly displaced, single-bone fractures, whereas surgery is typically needed for multiple or complicated bone fractures that are open, displaced, or involve the joint and also in large breed dogs and in weight-bearing bones. This retrospective study sought to characterize the outcome of metacarpal and metatarsal fractures via different modes of treatment. Medical records of 100 dogs were reviewed. Fractures were classified by type, bones affected, and degree of displacement. Treatment was classified into 3 categories: conservative ($n = 67$), surgical ($n = 25$), and combined ($n = 8$) treatments. Out-



come assessment was based on last reported radiographic and functional results. Computed gait analysis was evaluated in 15 of the dogs.

Data analysis showed complications occurred in 16% of dogs treated conservatively, 12% of dogs treated surgically, and 37% treated with combined therapy. Open fractures, displacement, and surgical intervention tended to increase the risk for complications; metatarsal fractures were at higher risk for complications as compared with metacarpal fractures. Malunions and synostoses occurred in 14% and 19% of cases, respectively, and

frequency of lameness detected on visual examination was surprisingly low (3%). The heterogeneous nature of the injuries and retrospective nature of this study make it difficult to propose specific guidelines for metacarpal and metatarsal fracture treatment, but most such injuries can be treated successfully regardless of the chosen therapy.

■ Global Commentary

The best treatment for metacarpal or metatarsal fractures remains a question. The evidence presented here confirmed previous studies reporting similar outcomes with conservative and surgical treatments. However, surgical treatment is usually recommended in multiple or articular fractures and those causing joint instability, typically with a splint bandage applied for a few weeks postoperatively when using internal fixation (eg, plates or intramuscular pins), as the implants are quite small and biomechanically weak. In these cases, one may wonder if bandage application on its own would have been enough for the fractures to heal.

Reduction of fractures and application of stabilization implants generally improve alignment of the fragments, which should facilitate fracture healing. Surgical (surgical stabilization and bandage) over conservative treatment (only bandage) has the advantage that if the patient develops significant bandage-related complications (eg, sores, wounds), the bandage can be removed sooner, as there are still implants stabilizing the fracture.—*Pilar Lafuente DVM, PhD, DACVS-SA, DECVS*

■ ■ Source

Long-term prognosis of metacarpal and metatarsal fractures in dogs. Kornmayer M, Failing K, Matis U. *VET COMP ORTHOPAED TRAUMATOL* 27:45-53, 2014.

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