Mandibular Symphysis Fracture in Canine: A Case Report

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ABSTRACT
The case report documents the successful surgical intervention followed by complete recovery of the fracture in mandibular symphysis of a German shepherd breed of dog.

Keywords: Dog, Fracture, Mandibular symphysis

INTRODUCTION
Symphysis of mandible of dog is considered a synarthrosis. It is a fibrous union between left and right mandible. The symphysis positions the left and right mandible for normal occlusion and also affords flexibility to lower jaws like a shock absorber. Mandibular fractures are usually bilateral; result from trauma, severe periodontitis or neoplasia [1] and invariably involve the mandibular symphysis [2]. The surgical treatment of mandibular symphysis depends on the type of damage involved:

Type1: separation with no break in soft tissue
Type2: separation with a break in soft tissue
Type3: separation with a break in soft tissue or tooth fracture

CASE HISTORY AND OBSERVATIONS
A 4 year old Great Dane was presented at the Teaching Veterinary Clinical Complex (T.V.C.C) of College of Veterinary Science and Animal Husbandry, MHOW with an anamnesis of accident. The mandible was palpated and found to be abnormally movable and painful to touch. On clinical examination, the dog showed to have a slight increased body temperature with normal pulse and heart rate. Radiograph of the mandible was taken to confirm the fracture. Based on history, clinical examination and X-ray diagnostic technique this case was tentatively diagnosed as mandibular fracture of type 1.

TREATMENT AND DISCUSSION
Cefotaxime and Meloxicam was administered at a dose rate of 20 mg/kg BW intravenous and 0.5 mg/kg BW intramuscular respectively. The animal was operated under general anaesthesia using Atropine as premedicant @ 0.04 mg/kg b.wt. intramuscularly followed by Xylazine hydrochloride @ 1 mg/kg b.wt. intramuscularly. General anaesthesia was induced with Ketamine anaesthesia @ 5 mg/kg b.wt. intramuscularly. Interfragmentary wiring was done in the case. Prior to wiring, holes were drilled in the right and left mandible. Through these drilled holes wire was passed and fastened tightly. The sharp ends of the cut wire were inverted onto the teeth such that it does not pierce any soft tissue. The
post operative medicaments included Injection Intacef Tazo along with meloxicam @ 0.5 mg/kg b wt. The owner was advised to lavage the animal’s mouth with chlorhexidine.

Best possible treatment for mandibular symphysis fracture is the use of intra oral splint. If there were enough teeth on either side of the fracture, then the splint would had been anchored (bonded) to the tooth crown. Sole wiring of the mandibular symphysis is not considered for fractures of type 2 and type 3 because kinks in the wire used for fixing the mandibular symphysis opens within a few days leading to incorrect occlusion of the fractured segments and further complications [1].

CONCLUSION
The clinical case of fracture in the mandibular symphysis region in Great Dane dog was successfully managed surgically and by proper post-surgical therapeutic management.

REFERENCES