

AN ISOLATED DORSO-MEDIAL TARSAL NAVICULAR DISLOCATION : A CASE SERIES

Muhammad Nizamuddin Ghazali¹, Farrel Mukhesh Rajenthiran², Tan Hong Quan², Mohd Hafizi Mohd Yusof², Zareze Abd Rahman³

¹Hospital Selayang, ²Hospital Kemaman, ³Hospital Pakar Sultanah Fatimah

Introduction: The tarsal navicular helps in maintaining the medial longitudinal arch of the foot, which is important for weight bearing and locomotion. An isolated dislocation of tarsal navicular is an extremely rare injury . We presented 2 cases of tarsal navicular dislocation which were treated with open reduction and fixation with K-wires with emphasis on the treatment options and outcomes.

Discussion: A 22 years old lady who presented with right midfoot swelling with history of motor vehicle accident 2 weeks prior. Plain radiographs show an isolated dorso-medial navicular dislocation without any other tarsal bone fracture. An open reduction surgery with 2 K-wire size 1.8 fixation was done following failed close reduction attempts. K-wires was placed for 6 weeks with patient eventually having secondary arthritis at 6 months follow up. A 21 years old man complained of right foot pain & swelling following motor vehicle accident. Plain radiographs show navicular fracture-dislocations with oblique fracture pattern (Sangeorzan Type 2) as well as concomitant neck of 2nd metatarsal fracture. Open reduction & K-wire fixation done with good anatomical reduction achieved and placed for 6 weeks .Subsequently patient was able to ambulate without pain at 3 months post trauma. Due to the rarity of this injury, the mechanism of this specific trauma is still not well understood. Most of the cases reported open reduction technique with good operative outcome and prognosis. Other treatment options include merger process, triple arthrodesis and partial or total excision. Complications following injuries includes osteonecrosis (avascular necrosis of the navicular bone is the most described complication, estimated at nearly 25%) and chondrolysis.

Conclusion: Accurate reduction and fixation along with regular physiotherapy is the mainstay of treatment for isolated navicular dislocation. Where close reduction failed or there's concomitant navicular fracture, open reduction offers good surgery outcome but with increased risk of specific set of complications.