

A Rare Case of Ankle Fracture in a Skeletally Mature Young Adult: Chaput Fragment

¹Yeo KS; ²Hau WWH

¹Department of Orthopaedic Surgery, Hospital Melaka, Melaka

INTRODUCTION:

A Chaput Fracture occurs in a skeletally mature adult where external rotation mechanism of the ankle causes the osseous avulsion of the anterior inferior tibiofibular ligament (AITFL) at the anterolateral aspect of the distal tibia as opposed to Tillaux fracture which is usually described in pediatric.¹

REPORT:

A 20 years old male involved in a motor vehicle accident and sustained left ankle pain and swelling. Left Ankle X-ray in AP view showed a translucent line over the lateral aspect of distal end tibia. In lateral view, a displaced anterodistal tibia fracture fragment was seen. We proceeded with CT Ankle. Chaput Fracture was diagnosed with an intra-articular displacement of more than 2mm. Open reduction and internal fixation were indicated. Our choice of implant was screw fixation. Patient was advised for non weight bearing ambulation for at least 6 weeks post operative.

The Chaput fragment is an avulsion fracture of the AITFL which signifies disruption of the syndesmosis.¹⁻² This injury is rare in adults because the mature physal bone is stronger than the ligament, which causes the ligament to tear before an osseous avulsion occurs.⁴ CT will be more accurate than plain radiography for determining the shape of the fracture fragments, amount of displacement, and condition of the articular surface.²⁻⁴ An intra-articular fragment displacement of more than 2mm mandates open reduction and internal fixation.²⁻³ Our approach was an anterolateral tibia incision. Unreduced Chaput fragment can lead a widening ankle, lower stability, ankle instability, pain, and accelerated arthritis.²⁻³



Figure 1: Left Ankle X-Rays

Figure 2: CT 3D Recon Ankle and Post-Op X-Rays

CONCLUSION:

Chaput fragment is a rare intra-articular ankle avulsion fracture in adult. Fracture displacement of more than 2mm recommends surgical fixation.

REFERENCES:

1. Somford MP, et al. Ankle Fracture Eponyms: The Journal of Bone & Joint Surgery. 2013;95(24):e198.
2. Leung KH, et al. Preoperative Radiography versus Computed Tomography for Surgical Planning for Ankle Fractures. J Orthop Surg (Hong Kong). 2016;24(2):158-162.
3. Feng SM et al. "All-Inside" Arthroscopic Treatment of Tillaux-Chaput Fractures: Clinical Experience and Outcomes Analysis. The Journal of Foot and Ankle Surgery. 2018;57(1):56-59.
4. Lee C, et al. Irreducible Ankle Fracture from an Interposed Chaput Fragment: A Case Report. JBJS Case Connector. 2017;7(2):e42-e42.