

APOA Foot & Ankle Council Presents..

# Case of the Fortnight

1st September 2021



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**Presented by:**



**Dr. Henry Ricardo Handoyo**

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## Learning Points:

- ▲ Malleolar fractures are commonly encountered in common orthopedic surgery, they are generally secondary to low and[1] high energy trauma, but the combined fractures of the malleoli along with avulsion fracture of AITFL in adults is very rare.(1)
- ▲ In the presence of an associated syndesmotic instability following anatomical reduction and fixation of ankle fracture, stabilization of syndesmosis is essential for improving functional outcomes and avoiding posttraumatic ankle arthritis.(2-4)
- ▲ After we performed anatomical reduction and internal fixation of displaced lateral malleolar fracture[2], we evaluated the anterior syndesmosis under direct vision through the same approach with the lateral malleolar fracture[3]. We then checked the stability of syndesmosis by using the hook test. We defined syndesmotic instability as more than 2 mm of lateral translation of the distal fibula (using a sterilized micrometer ruler). (5)

**Title:**

**Ankle Fracture with Atypical Syndesmotic Injury**

*Upcoming Case of the Fortnight  
on 15th September 2021*

**Presented by:**

**Dr. Rajiv Shah**

M.S. (Orthopaedics)

Foot & Ankle Orthopaedics, India



**Title:**

**Bilateral Tibiotalocalcaneal Fusion**

Want to present a case? Write to...



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## Ankle Fracture with Atypical Syndesmotic Injury

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### Clinical presentation

A 55 year-old female patient came to our hospital with pain and swelling on her right ankle following a slip and falls down stairs 2 days before admission.

### Clinical evaluation

Upon physical examination, it showed that she was hemodynamically stable. She was unable to walk and had a distorted ankle with varus deformity of the foot. She had very limited motion in her ankle, which was exquisitely tender to palpation at the lateral malleolar and syndesmotic region. The vascular and neurological evaluation of the foot did not find any detectable lesion.

### Radiological evaluation

The initial radiological assessment from the emergency room revealed a SER 2 and an avulsion fracture of the AITFL (Modified Wagstaffe Classification type III).

**(Fig1.)**

Preoperative radiological AP and lateral view of right ankle.



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Fig. 2



(Fig 2.)

Preoperative radiological mortise view of right ankle

## Treatments

Treatment consisted of open reduction and internal fixation of lateral malleolus with distal fibula plate and screw from anterolateral approach. We evaluated the stability of syndesmosis by hook test, and we found that syndesmosis was unstable. By the same approach, we performed a manual reduction and fixation of fragments of the AITFL avulsion fracture using miniplate 2.0-mm and screw. Following the fixation of the avulsed fragment, we repeated the hook test to reevaluate the syndesmotic stability. From the hook test we found that there was widening more than two mm (lateral translation of the distal fibula). Then, after we did reduction using a bimalleolar forceps and maintained the reduction under fluoroscopy, we inserted a 3.5-mm cancellous screw into the syndesmosis (under fluoroscopy as well). After surgery, a short leg slab was applied and the patient was instructed not to bear weight on the operated limb for six weeks. At six weeks after surgery, the patient started range-of-motion exercises and gradual partial weight bearing. Syndesmotic screw was removed three months after surgery. Full weight bearing was allowed at twelve weeks after surgery.

(Fig 3.)

Postoperative radiological AP view of right ankle.

Fig. 3





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(Fig 4.)

Postoperative radiological lateral view of right ankle



(Fig 5.)

Postoperative radiological mortise view of right ankle

Upcoming Event

**Advanced Foot & Ankle Course:**  
APOA Foot & Ankle Section Initiative  
December 3<sup>rd</sup>, 4<sup>th</sup> & 5<sup>th</sup>, 2021



**Arvind Puri**  
Course Director  
& Secretary,  
APOA Foot & Ankle Section



**Gowresson Thevendran**  
Course Director  
& Council Member,  
APOA Foot & Ankle Section

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