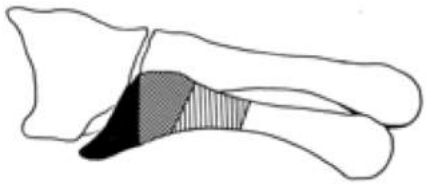
CASE 64

Different types of fracture at base of the V metatarsal. How do you manage this?

Diagnosis: Jones Fracture

In this particular instance: healed with further casting for 8 weeks.

Diagnosis: Non-union of Jones fracture healing with weight bearing cast.



3 distinct fracture patterns that occur in the proximal V metatarsal:

I. Tuberosity avulsion fractures

II. Acute Jones fractures,

III Diaphyseal stress fractures.

Each of these fracture patterns has its own mechanism of injury, location, treatment

options, and prognosis regarding delayed union and nonunion. Tuberosity avulsion fractures are the most common in this region of the foot. The majority heal with symptomatic care in a hard-soled shoe.

The true Jones fracture is an acute injury involving the fourth-fifth intermetatarsal facet. These injuries are best treated with non-weight-bearing cast immobilization for 6 to 8 weeks. The rate of successful union with this treatment has been reported to be between 72% and 93%. For the high-performance athlete with an acute Jones fracture, early intramedullary-screw fixation is an accepted treatment option.

Non-acute diaphyseal stress fractures of the proximal fifth metatarsal and Jones fractures that develop into delayed unions and non-unions can both be managed with operative fixation with either closed axial intramedullary-screw fixation or autogenous cortico-cancellous grafting.

Robert Jones 1857 to 1933

Many would argue that he was the greatest orthopaedic surgeon that the world had ever seen. It was said that when Jones operated, "Time stood still".

Jones was a nephew of the great Hugh Owen Thomas.

In 1896, Jones published the first report of the clinical use of an X-ray to locate a bullet in a wrist.

Jones wrote several important books such as "Injuries of Joints" in 1915 and "Notes on Military Orthopaedics" in 1917.

His textbook "Orthopaedic Surgery" is said to be the first to have dealt systematically with the diagnosis and treatment of fresh fractures.

1.Robert Jones described the fracture of the fifth metatarsal which bears his name in the *Annals of Surgery* in 1902. In his paper, Jones describes the fracture in a series of 6 patients, **the first of which was himself.** He had injured his foot while **dancing several months** earlier, and had thought the injury to be to a tendon in the foot. He examined himself the day after the injury, and found that the tendon was intact, but he

could not find definite evidence of bony injury. He asked a colleague, Dr. David Morgan, to X-ray his foot, and a fracture above the base of the fifth metatarsal was found. The finding of similar fractures in several patients after his own prompted him to write about it.

2.Jones procedure of ankle stabilisation

Peroneus brevis tendinosis for ankle instability

3.Jones compression bandage for the knee

4. Clawed Great toe: Jones procedure for the clawed great toe:
Fusion of IPJ Transfer EHL to the neck of I metatarsal

4.Jones tendon transfer for radial N palsy
Jones Transfer
1. PT to ECRL / ECRB
2. FCU to EDC
3. FCR to EPL (+ EPB & APL)

Problem is that both wrist flexors are transferred - loss of FCU may lead to radial deviation

After the first world war, he was back to his work in Agnus Hunt Hospital, to take care of crippled children.