

INTRAMEDULLARY NAILING FOR TIBIOTALOCALCANEAL ARTHRODESIS IN CHARCOT HINDFOOT

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INTRODUCTION:

Charcot hindfoot arthropathy is characterized by collapse of ankle and subtalar joint due to degeneration of articular cartilage leading to subluxation and dislocation of the joint. (1) Previously, many deformities due to Charcot joint was treated with amputation. We are illustrating a case of an arthrodesis technique to attain limb salvage in a Charcot arthropathy's patient.

CASE REPORT:

A 34 years old man with diabetes Mellitus Type 2 presented with progressive non healing ulcer and instability of right ankle in 3 months duration. He had history of ray's amputation of 3rd, 4th and 5th toes due to infected diabetic foot ulcer. On examination, there was significant midfoot edema, rocker bottom deformity, notable plantar prominences corresponding pre ulcerative lesions and severe forefoot abduction. There were no signs of acute infection. Radiographs of the right foot and ankle revealed osseous fragmentation with Charcot hindfoot joint dislocation. Noninvasive vascular testing showed no evidence of significant arterial disease. Laboratory testing was unremarkable. Patient opted for surgical intervention after failed bracing and conservative management. Postoperative radiographs demonstrated maintenance of the lower extremity alignment. Upon follow up, the wound care was satisfactory. He remained non-weight bearing for eight weeks, and subsequently began weight bearing and underwent incremental increases in activity level over the next three months and now has a satisfactory ambulatory in diabetic extra depth shoes, without evidence of soft tissue or osseous breakdown.

Figure 1&2:Preoperative and postoperative xray of hindfoot athrodesis

Figure 3: Satisfactory healing of the wound

DISCUSSIONS:

Charcot's hindfoot arthropathy is difficult to treat. The major problem is because of the associated deformities and joint instability. Most cases are treated with braces and in advanced cases may require amputation. Hindfoot athrodesis is performed as a limb salvage surgery in attempt to preserve the patient's limb (2) The primary indication for surgical reconstruction in our patient are non braceable deformity associated with instability, ulceration, presence of osteomyelitis and significant pain. There is a significant risk of infection and non-union due to their inherent poor bone quality and healing capacity. These low fusion rates underscore the importance of maintaining compression to ensure stability and promote healing in an effort to salvage the patient's limb. Preoperative and postoperative measures that include assessment of vascular status, optimisation of glycemc control, and cessation of tobacco use ensures a better outcome.

CONCLUSIONS:

Hindfoot athrodesis offers a safe and reliable salvage option with acceptable functional outcome.It significantly improved the quality of life of the patient with Charcot hindfoot arthropathy

REFERENCES:

1. Elgohary Hatem SA, Elghaffar Mhmood A. Intramedullary Nail for Tibiotalocalcaneal Arthrodesis in Charcot Hindfoot and Its Implication on Quality of Life in Egyptian Patients. *Foot Ankle Stud.* 2018; 2(1): 1009.
2. Thomas RL, Sathe V, Habib SI. The use of intramedullary nails in tibiotalocalcaneal arthrodesis. *J Am Acad Orthop Surg.* 2012;20:1-7

Figure 1

Figure 2

Figure 3

