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RESEARCH ARTICLE

OUTCOME AFTER 5YRS OF TREATMENT OF OPEN COMPLEX, COMMUNITTED # DISLOCATION OF TALAR BONE and LATERAL MALLEOLAR EPIPHYSIS OF ANKLE IN A ADOLESCENT MALE : A CASE REPORT

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ABSTRACT

Back ground: Open complex fracture dislocation of talar bone along with ankle fracture is a severe disabling injury around ankle. **Material and Methods:** Treatment Between reconstruction and reduction or excision of total talar bone is still controversial along with unpredictable outcome of treatment. **Results:** To report the case of an open ankle fracture dislocation with talar fracture fragment extrusion focusing on treatment modality and outcome. **Conclusion:** Meticulous osteosynthesis, Debridement and postoperative care can lead to successful talor union and joint function.

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INTRODUCTION

Open talar fracture impose a challenge in reduction and Prevention of infection and osteonecrosis and malunion. Fracture in children below 12 yrs of age good outcome in spite of early osteonecrosis of talar bone if they are kept Prolonged non weight bearing osteonecrosis resolved in 2-3 years. But the older children have unfavourable outcome. Infection of talus fracture impose a serious challenge due to lack of vascular supply and being cancellous bone. Repeated Sequestrectomy and debridement eventually lead to total talectomy and fusion in the form of triple arthrodesis.

MATERIAL AND METHODS

15 years old boy presented to us one day after road traffic accident. He sustained open crush injury of right ankle, crushing was more on lateral side of ankle with fracture of body of talus and dome, and neck of right talus along with fracture of lateral malleolus, extruded outside the ankle mortise along with contamination. Immediately patient was taken in the Operation theatre, irrigation, debridement and fixation of talar fragments with multiple screws and K.wire through lateral ankle malleolus. Post operatively posterior slab was applied. Ankle mobilisation started at 6 weeks. Weight bearing started after 3 months and patient followed after 4.5 years, implant removed except one screw, antibiotics and dressings done .Patient followed till today.

RESULTS

Fracture in children below 12 yrs of age good outcome in spite of early osteonecrosis of talar bone if they are kept Prolonged non weight bearing osteonecrosis resolved in 2-3 years patient followed till today

Classification of fracture talus

- Fracture of talar neck
- Fracture of talar body and dome
- Osteochondral Fracture

Blood supply enters the bone in three main ways

- Through the talar neck
- Through the foramina in the sinus tarsi and canal.
- Deep into the foramina in the medial surface of the talar body

Hawkin's classification

Type I, II and III depending upon amount of disruption of blood supply to talus.

- Minimal disruption and minimal damage.



Preoperative pic



Immediate post op



Clinical picture after 4.5 yrs



Follow up after 4 yrs

- Subtalar joint subluxed and 2/3 source of blood supply lost
- Total dislocation and 3/3 blood supply lost and incidence of osteonecrosis is high

DISCUSSION

The talus is the only tarsal bone without any muscular attachments; however, it has strong ligamentous attachments to the adjacent bones. About 60% of the talar surface is covered with cartilage predisposing it to circulatory problems.¹ The blood supply to the talus is from the artery of the tarsal canal, artery of sinus tarsi and deltoid branches. Fracture—dislocation of the talus usually occurs as a result of high-energy injuries. This is because considerable force is needed to dislocate the talus from its surrounding joints, namely the tibiotalar, subtalar and talonavicular joints. Since it is a high impact injury, it is usually accompanied by multiple fractures. Two per cent of all lower limb injuries and 5–7% of all foot injuries have associated talus fracture.

Conclusion

Meticulous osteosynthesis, Debridement and postoperative care can lead to successful talar union and joint function. A talectomy should be kept as a salvage procedure in type II talar fracture dislocation.

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