

TOTAL TALAR REPLACEMENT: A NOVEL METHOD FOR OSTEOCHONDRAL LESION WITH LARGE TALAR BODY CYST; A CASE REPORT

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INTRODUCTION:

Osteochondral defect (OCD) of talus can result from ankle fractures, sprains, avascular episodes or genetic condition. Uncontained/unstable shoulder lesion associated with large bone defect, subchondral collapse and adjacent joint arthritis is surgically challenging. Treatment can range from cartilage procedure, osteochondral autograft transplant (OATS) or allograft procedures. Complications such as donor site morbidity, graft rejection and poor subchondral repair have made them less favourable. To overcome this, an individualised talar prosthesis reconstruction is a novel alternative. It provides a one stage surgery, precise and efficient implant that mimics physiological ankle ROM and biomechanics.

REPORT:

37-year old Indian gentleman had 4 years worsening right ankle pain and swelling after a right open fracture tibia and Weber C lateral malleolus fracture in 2013. CT imaging showed large unstable medial OCD at shoulder region extending and connected to large cystic lesion over talar body, with extensive oedema and subtalar arthritis. Total talar replacement (TTR) was decided as best treatment option. A custom made 3D titanium implant was created using contralateral limb CT. Anterior approach was used and talus was removed by piecemeal technique to its entirety. Degenerated subtalar joint was observed with intact tibial plafond. Prosthesis was inserted after preparation of subtalar posterior facet and fusion by using 2 cancellous screws to the calcaneum via premanufactured holes on the implant was done. ROM exercise was instructed gradually from first day post surgery. Weight bearing as tolerated was allowed at 2 weeks with walking boot. He gained good and painless full ankle dorsiflexion (0-25°) and plantar flexion (0-30°) at 3 weeks.



Figure 1:CT showed OCD over talar body with large bone defect



Figure 2:custom made TTR

CONCLUSION:

TTR with subtalar arthrodesis is an alternative treatment in managing large uncontained shoulder lesion of talus with major bone loss and adjacent joint arthritis with less morbidity.

REFERENCES:

1. Powers RT et al; Surgical Treatment for Osteochondral Lesions of the Talus. Arthroscopy.2021 Dec;37(12)