

Case Report

A CASE OF CHRONIC ULNA OSTEOMYELITIS IN PAEDIATRIC PATIENT MANAGED WITH FIBULA GRAFTING

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ABSTRACT

Background: Chronic osteomyelitis in the paediatric population poses a significant therapeutic challenge due to persistent infection, bone loss, and the risk of functional impairment. Management requires meticulous surgical planning to eradicate infection while restoring skeletal integrity and limb function.

Case Presentation: An eight-year-old male child presented with chronic discharging sinuses over the ulnar aspect of the forearm following a history of trauma and multiple previous debridement procedures. Radiological evaluation revealed chronic osteomyelitis of the ulna with sequestration and segmental bone loss.

Management: The patient underwent staged surgical management, including sequestrectomy and complete resection of infected bone, followed by placement of antibiotic cement and temporary stabilization with a Kirschner wire. Due to failure of previous interventions and significant bone defect, definitive reconstruction was performed using autologous fibular bone grafting with square nail fixation.

Results: At 14 months of follow-up, the patient demonstrated good clinical and radiological recovery with satisfactory incorporation of the graft. Functional assessment showed a reasonable range of motion at the elbow joint, and the patient was able to perform routine daily activities such as writing and eating without difficulty.

Conclusion: Fibular bone grafting following thorough debridement is an effective and reliable option for managing chronic ulna osteomyelitis in paediatric patients, providing infection control, bone continuity restoration, and acceptable functional outcomes.

Keywords: *Chronic osteomyelitis, Paediatric ulna, Fibular bone grafting, Sequestrectomy, Bone infection, Functional outcome*

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INTRODUCTION

Osteomyelitis is infection of bone in clinical terminology. Orthopaedician's worst nightmare, bone infections are very notorious and difficult to treat. However, over the years, the surgical management of the osteomyelitis has evolved significantly, making it an area of huge scope and interest in the world of modern day orthopaedics.

Pre operative details

8 year old male with history of fall down (trauma) presented with open discharging sinuses over the ulnar aspect of the forearm. The patient had previously undergone multiple debridement surgeries before this particular presentation



Pre operative x-ray

AIMS AND OBJECTIVES

Aim- to now and understand the management principles of chronic ulna osteomyelitis, in paediatric age group, with discharging sinuses.

Objectives - to assess the functional outcome, clinical outcome, radiological outcome of the surgeries performed. To improve the quality of life of the patient

Method, management, intraoperative findings and post operative details



Ulna sequestrectomy, resection of infected bone, antibiotic cement with k WIRE



Intra-operative picture



Infected bone completely removed



Fibula bone grafting to replace the bone loss, after the patient presented with failure of the previous surgery





Fibula bone grafting with square nail

Intraoperative pictures:





14 months follow up x-ray since the first surgery

Functional outcome

Patient was able to perform routine activities, and do most of the routine work like writing, eating etc.



Elbow extension



Elbow extension



Elbow flexion



Elbow flexion

CONCLUSION

The proposed line of management is a good and efficient modality for the management of osteomyelitis, and can be looked upon as a go to method for similar cases in near future

RESULT AND DISCUSSION

There was good clinical recovery, with reasonably good range of motion of the elbow joint of the affected limb, with patient able to do the routine activities of life.

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