

Postoperative Osteomyelitis : A Challenge And Dilemma

¹ Mohd Diah MRR, Muhamad H, Osman AH, Aridz MR, Yahya MY
1 Department of Orthopedic Surgery & Traumatology,
Hospital UiTM Puncak Alam, Selangor

INTRODUCTION

Postoperative Osteomyelitis is not uncommon following fracture fixation. It is characterized by infection of the bone and marrow, caused by direct or indirect local inoculation by microorganisms from the contaminated soft tissue after trauma, during reconstructive bone surgery or implant insertion.

REPORT

A 14-year-old boy was involved in a motor-vehicle accident in October 2021, sustained closed fracture right supracondylar femur which was fixed with a distal compression plate.

However, he came back a week after with severe pain over right knee. Examination revealed pus discharge associated with maggots and severe tenderness over the right knee with limited range of motion. Plain radiograph showed no osteomyelitic changes and implant insitu. Broad spectrum antibiotic was started and urgent wound debridement and arthrotomy washout was performed. Intraoperative culture taken and antibiotic was adjusted accordingly.

Repeated plain radiographs after four weeks of antibiotic, revealed sequestrum and involucrum over the right distal femur. Despite completed six weeks of antibiotic, patient developed pain and swelling over the lateral aspect of right thigh which prompt emergency wound debridement and removal of implant. MRI of the right femur showed sequestrum over the distal femur with involucrum surrounding it.

Hence, sinusectomy, sequestrectomy and limb reconstruction system (LRS) fixation was performed as the definitive surgery. A good outcome was achieved with patient able to ambulate and infection eradicated.

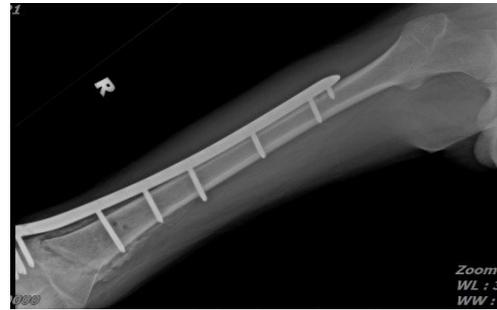


Figure 1 : Right femur radiograph on admission

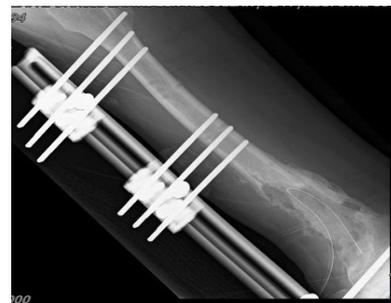


Figure 2 : Right femur radiograph post LRS fixation

CONCLUSION

Postoperative osteomyelitis remains one of the most challenging postoperative complications.

The incidence of postoperative infection is higher in open fracture with 2-16%, and mostly involving the tibia ¹. Hence, caution should be taken since the first surgery to reduce chance of postoperative infection. Targeted antibiotic, thorough wound debridement and removal of implant ² showed great outcome in managing postoperative osteomyelitis.

REFERENCES

1. Ziran BH. Osteomyelitis. J Trauma. 2007; 62 (6 Suppl):S59-60

2. Tan, Y., Li, H., Pan, Z. *et al.*
Modified algorithm for managing
postoperative osteomyelitis

following fracture fixation with
Cierny-Mader type. J Orthop Surg
Res 15. 2020; 212