

Antibiotic Impregnated Cement Ilizarov Rod in Non-Union Osteomyelitis Femur

¹Ng, Sherwin Johan, ¹Seo Soon Teck; ¹Mohd Shahir Aziz; ¹Mohamad Fauzlie Yusof

¹Department of Orthopedic Surgery, Hospital Melaka

INTRODUCTION

Infected non-union of long bones is a challenging complication of fracture. Especially in presence of intramedullary nail. Many literature discussed the two stage methods are commonly used with the first stage aimed at controlling the infection and the second stage at inducing union (1). Several case reported use of intramedullary nail, K-nail and K-wire as antibiotic impregnated cement. Another option using Ilizarov rod as antibiotic impregnated.

REPORT:

A 15 years old girl who had history of osteomyelitis femur and multiple wound debridement surgeries and underwent intramedullary nailing left femur done 3 months ago, was presented with pus discharge over surgical wound of her thigh over distal screw. Wound debridement and removal intramedullary nail, antibiotic impregnated cement mould with the Ilizarov rod was planned.

Intraoperatively, noted pus from the medullary canal, all screws and nail are loose. Thorough debridement was done. Medullary canal was reamed and irrigated. An Ilizarov threaded rod was chosen, appropriate to the canal length of the affected bone. A chest tube of similar internal diameter to the reamed canal was selected. While still liquid, cement was filled in tube and the Ilizarov rod is immediately inserted into it. Once set, the chest tube was peeled off with surgical knife. A female hinge, secured with a nut, was placed on the proximal end, acting as a hook. The cement and rod construct was then inserted down the medullary canal.

After 2 months post-operative, all the inflammatory marker normalize, and surgical wound well heal. Fracture site showed callous formation.



Figure 1: X-rays and intraoperative photo showing non-union of left femur with osteomyelitis distal femur

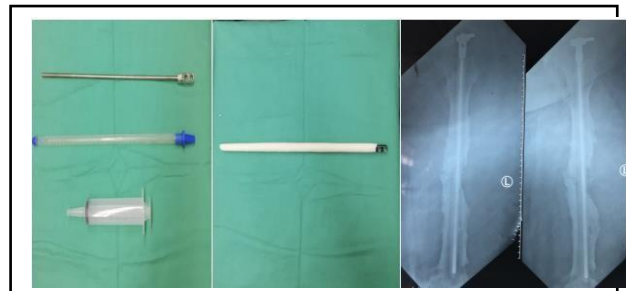


Figure 2: Intraoperative photo preparation and Post operative X-ray of antibiotic impregnated cement with Ilizarov rod insertion over left femur

CONCLUSION:

The infected non-union of the long bones in the presence of the intramedullary nail is a dreaded complication of fracture management. Amongst array of therapeutic modalities, the antibiotic impregnated cement coated Ilizarov rod that we used in our case is one of the good option.

REFERENCES:

- 1- Lei H, Yi L. One-stage open cancellous bone grafting of infected fracture and nonunion.