

## Primary Definitive Fixation in the Comprehensive Management Of Polyfracture

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### INTRODUCTION:

Polyfracture management lacks a standardized treatment algorithm unlike polytrauma. This report shares our experience in managing one of such cases.

### REPORT:

Following a road traffic accident, a 29-year-old gentleman sustained a complex array of injuries including open fracture of the distal third of right femur with right patella fracture; closed fractures of right femoral neck, proximal third tibia, midshaft fibula, medial malleolus, midshaft humerus, radius and ulna shaft, as well as closed fracture of the right fourth metacarpal bone, together with total brachial plexus injury.

In a setting with limited OT time, as the patient was stable and planned for emergency surgery of the open injuries, definitive fixation of all the fractures were done in the same setting.

All fixations were done in supine position by two operating teams, one for the lower limb and another for the upper limb. The lower limb surgery started with debridement of the open fractures followed by retrograde nailing of the femur, nailing of the tibia, cerclage wiring of the patella and fixation of the femoral neck. Simultaneously, the upper limb team started with humerus plating followed by radius and ulna plating and K-wiring of the metacarpal. The surgery took 8 hours and the patient received 3 units of packed red cell transfusion.

Postoperatively, the patient was nursed in intensive care unit. Multimodal pain management ensured adequate pain relief and early mobilization.



**Figures 1 and 2:** Post-operative radiographs of the right femur, radius and ulna.

### CONCLUSION:

In stable patients with multiple fractures, with good teamwork, early definitive fixation for all fractures in one setting is feasible. Careful treatment strategy should at least involve the anaesthesia team, nursing team, acute pain service team and rehabilitation team together with orthopaedic team.

### REFERENCES:

1. Tscherne, H., Regel, G., Pape, H. C., Pohlemann, T., & Krettek, C. (1998). Internal fixation of multiple fractures in patients with polytrauma. *Clinical orthopaedics and related research*, (347), 62–78.