

# Medial surface plating of midshaft humerus fracture

Kashfullah K<sup>1</sup>, Sharil AR, Anas Y, Hanif W, Iylni MN, Dinesh M, Helmi H, Hifzhan A, Ariff A, Sabrina A, Solihin Z, Ng JS, Boon CG

<sup>1</sup>Department of Orthopaedics, Hospital Sultan Abdul Halim, Kedah, Malaysia

## INTRODUCTION

Plate osteosynthesis is an established gold-standard approach for treatment of humeral shaft fractures. Conventional lateral plating through anterolateral approach is challenging in view of the bony surface is not flat to fix a plate securely. The medial part of the humeral shaft however provides a flat surface to accommodate a plate during humeral shaft fracture fixation.

## REPORT:

A 15-years-old girl presented to our center following a road traffic accident with a left midshaft humerus fracture. Intraoperatively, noted that there was difficulty in fixing a narrow dynamic compression plate over the lateral side of the humeral shaft. The plate was fixed on the medial side where the bony surface is flat and could accommodate the plate well. Radial nerve was identified, protected and its position documented for future reference.

## DISCUSSION:

There has been reports of humeral shaft plate fixation done over the lateral, posterior, and the medial surface. In lateral surface humerus plating, the plate is not in full contact with bone in view of irregular surface and there is risk of radial nerve injury. The medial side of humeral shaft allows for full contact of plate to bone.

## CONCLUSION:

Medial humerus plating is advantageous as its flat surface allows for full contact of plate during fixation and it has lower risk of radial nerve injury. Adequate plate positioning aids in achieving stable fixation during plating of long bones is essential to ensure successful union.

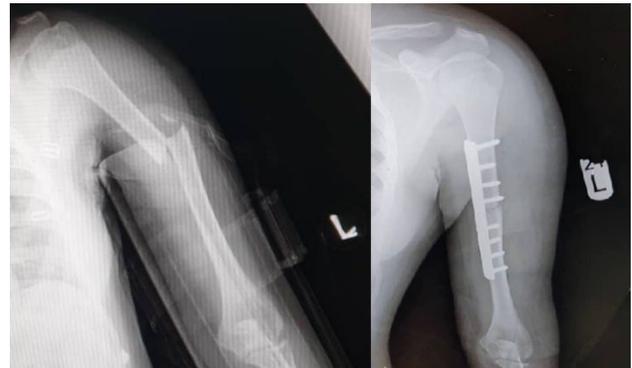


Figure 1. Pre & Post operative x-ray images

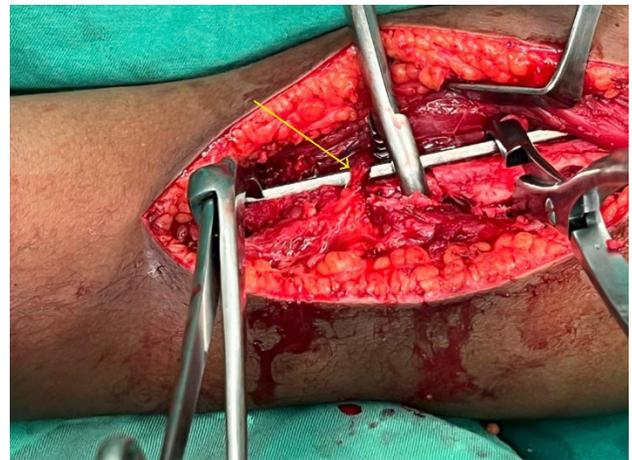


Figure 2. Intraoperative image of medial surface humerus plate fixation.

## REFERENCES:

1. Rai SK, Sud AD, Kashid M, Gogoi B. Anteromedial Surface Plating for Midshaft Fracture Humerus Through an Anterolateral Approach - A Better Option than Anterolateral Plating. *Malaysian Orthop J.* 2020;14(3):66-72. doi:10.5704/MOJ.2011.011
2. Lu, S., Wu, J., Xu, S. et al. Medial approach to treat humeral mid-shaft fractures: a retrospective study. *J Orthop Surg Res* 11, 32 (2016). <https://doi.org/10.1186/s13018-016-0366-1>
3. Kirin I, Jurišić D, Grebić D, Nadalin S. The advantages of humeral anteromedial plate osteosynthesis in the middle third shaft fractures. *Wien Klin Wochenschr.* 2011 Feb;123(3-4):83-7. doi: 10.1007/s00508-010-1523-x. Epub 2011 Feb 4. PMID: 21287282.