

An Alternative Method to Radial Neck Fixation: A Case Report

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INTRODUCTION:

Radial neck fractures in adult is commonly fixed with open reduction and internal fixation. We present to you a case of Mason-Hotchkiss Type 2 Fracture which is fixed percutaneously with Kirschner wires.

REPORT:

A 21-year-old healthy male complain of painful elbow and reduced range of motion of left elbow after falling from 1 meter height. On examination of his right elbow, it is tender with limited flexion and extension (45/45) and pronation and supination (15/15). His X-rays showed radial neck fracture with displacement of radial head. Intraoperatively, size 3mm k-wire is used to reduce the angulated neck via Metaizeau technique. Then another two k wire size 1.6mm used to buttress the radial head. Post operatively, his elbow is splinted for three weeks after which he was allowed active range of motion exercise. Wires are removed after a month. After 3 months, patient have MEPI score of 100.

Discussion:

This alternative method to radial neck fixation has better soft tissue preservation and placement of the radial head buttress plates within safe intervals. As it is percutaneously done, there is less risk of PIN injury, does not require splitting of the common extensors or elbow stabilizers as done in the traditional Kaplan or Kocher approach for open reduction. It does however require the need for temporary elbow splint. Although the incidence of non-union is rare in such fractures (1), this percutaneous method can protect tenuous blood supply to the radial head. Additionally, this method is a more affordable option.

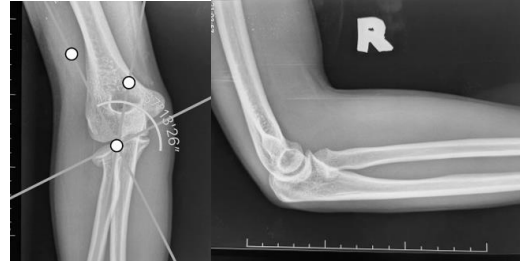


Figure 1. X-rays showing preoperative fractures with radial neck shaft angulation of 37 degrees.



Figure 2. Intraoperative Imaging

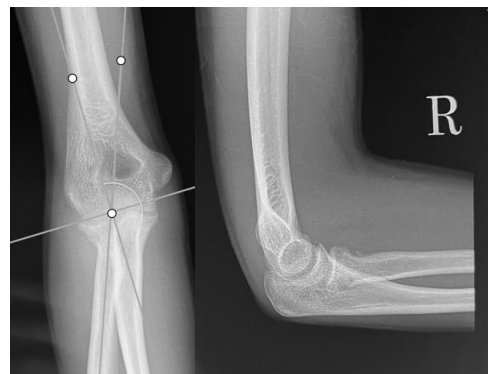


Figure 3. X-rays show postoperative 3 month with radial neck shaft angle of 19 degrees.

CONCLUSION:

K-wire buttressing is a safe, good and more affordable alternative to the radial head buttressing plate in radial neck fracture Mason-Hotchkiss type 2.

REFERENCE: 1. Wilton A, Pananwala H (November 28, 2022) Non-union of Conservatively Managed Radial Neck Fractures in Adults: A Systematic Review. *Cureus* 14(11): e31957. doi:10.7759/cureus.31957