

A Single Dorsal Approach in Open Reduction with Diamond Shape Technique K-wiring for Transcaphoid Perilunate fracture Dislocation

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INTRODUCTION:

Perilunate dislocation is a rare injury and compromises approximately 3% of all carpal injuries¹. It is catastrophic injury to the wrist after high energy injury. Here, we presented a case of trans-scaphoid perilunate fracture dislocation using single dorsal approach for open reduction with diamond shape technique K-wiring.

REPORT:

A 19-year-old male was involved in industrial injury and presented with pain over the left wrist. His left wrist was swollen, tender, and unable to move. No open wound. Sensation was intact. X-ray showed perilunate dislocation with fracture left scaphoid and left ulnar styloid. He was admitted for open reduction using single dorsal approach, left scaphoid was fixed with screw and 1.2 mm k-wiring. Lunotriquetral (LT) ligament was repaired with anchor suturing. Scapholunate (SL), LT, scaphocapitate, and triquetrohamate joints were transfixied in diamond shape pattern by using four K-wires size 1.6mm, then immobilised with below elbow backslab. K-wires and backslab were removed after 6 weeks. After 3 months, he regained full range of wrist movement and returned back to work.



Figure 1: Preoperative left wrist x-ray



Figure 2: Postoperative left wrist x-ray

DISCUSSION

Prompt and early surgical intervention are required for perilunate fracture dislocation. Delay in diagnosis and treatment, patients will experience poor outcomes, including restricted wrist movements, pain, and osteoarthritis². Diamond shape technique K-wiring able to maintain the reduction by keeping proximal carpal row against distal carpal row in an anatomical position¹. This technique created a closed ring to provide stable fixation. Also, this technique able to provide strong reduction not only maintaining SL or LT gapping but also preventing DISI or VISI deformity.

CONCLUSION:

Diamond-shaped technique K-wiring in perilunate fracture dislocation is a simple, effective, and reliable technique in providing stable fixation and satisfactory clinical outcomes.

REFERENCES:

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