

Neglected Transscaphoid Perilunate Dislocation – A Case Report

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Abstract- Perilunate dislocations are some of the most severe injuries around the wrist. They can result in significant morbidity to the patient¹. We report a rare case of neglected trans-scaphoid perilunate dislocation which was managed by open reduction and internal fixation with good post-operative functional result of the patient.

Index Terms- Neglected dislocation, Perilunate dislocation, wrist injury, scaphoid fracture .

a cast was applied for 1 ½ months after which it was removed. No further treatment was given. He presented to us 4 months after the initial injury with pain and stiffness of the wrist and restriction of movements.

On examination he had dry and atrophic skin with deformity at the wrist and restriction of movements (Fig 1a and 1b). Dorsiflexion at the wrist was limited to 20° and palmar flexion to 40°. There was also a restriction of pronation (60°) and supination (15°) (Fig 2a and 2b).

I. CASE REPORT

A 35 year old male sustained injury to the left wrist following a fall from height from about 20 feet with hand in an outstretched position. The patient showed to a local doctor where



Fig 1 (a) and (b) –Clinical Photographs of the patient at presentation showing deformities at wrist.



Fig 2 (a) and (b) – Photographs of the patient showing restricted motion at the wrist.

X-rays and CT scan were done which showed a trans-scapoid perilunate dislocation (Fig 3a and 3b).



Fig 3 (a) and (b)- Preoperative Radiographs of the patient showing trans-scapoid perilunate dislocation

The patient was taken up for operative intervention and treated by open reduction and internal fixation(Fig 4a- 4d).The involved site was opened by a single incision volar approach, the dislocated lunate reduced and stabilized with 2 cross k wires. Ligament repair was not performed .Successful reduction of

carpi was obtained in both the antero-posterior and lateral views.6 weeks after the procedure the k-wires were removed and the patient has been started on active physiotherapy to improve wrist motion ,the patient is currently following in the opd on a regular basis .

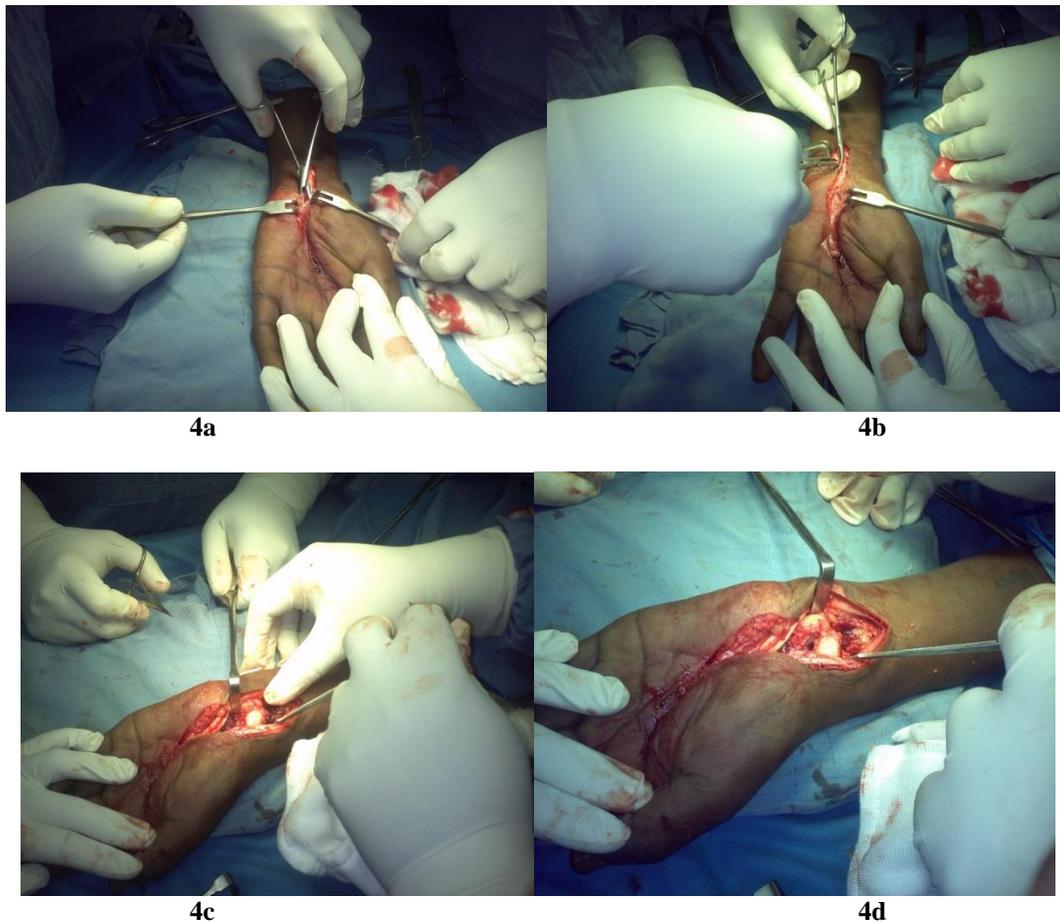


Fig 4(a) – 4(d): Photos showing open reduction and internal fixation by a volar approach.



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Fig 5 – Post operative radiograph after open reduction and internal fixation

II. DISCUSSION

Trans-scaphoid volar lunate dislocations are rare injuries and the exact mechanism of injury is still a matter of debate. Forced hyper flexion and forced hyperextension have both been proposed as the injury mechanism.^{2,3,4} These are severe injuries and can lead to a number of complications including

osteonecrosis of the scaphoid and lunate, stiffness of wrist, sympathetic dystrophy etc.

Although both closed reduction and open reduction with internal fixation have been described as the methods of treatment, increased chances of nonunion and carpal malalignment have been reported with closed reduction.⁵ Early reduction is associated with much improved functional outcome.⁶ The type of surgical approach is also controversial,

while some surgeons advocate a dorsal approach, most prefer a volar approach.⁷

Our patient presented to us four months after the injury. Although closed reduction and casting was done for the patient but as is visible from the x-rays the dislocation as unreduced when the patient presented to us and the patient had developed significant wrist stiffness and restriction of motion.

The factors that have a negative influence on the clinical and radiographic results include delay in reduction, severe soft-tissue lesions, open wounds, inadequate reduction, and fracture malunion.^{5,8} Carpal instability, degenerative changes of the radiocarpal and midcarpal joints, and osteonecrosis of the lunate and scaphoid often complicate the injury.

Osteonecrosis of the scaphoid has been reported to occur in as many as 100% of cases although the potential for revascularization exists and the osteonecrosis may resolve.⁹ Panting et al noted osteonecrosis of the lunate or the proximal pole of the scaphoid in twelve (44%) of twenty-seven patients with transscaphoid lunate or perilunate dislocation and they reported that revascularization took place uneventfully in nine of those twelve patients.¹⁰

In our patient satisfactory reduction and stabilization of the lunate was achieved with open reduction and k-wiring. No significant osteonecrosis was seen in either the lunate or the scaphoid.

In conclusion, a satisfactory outcome can be achieved after a trans-scaphoid perilunate dislocation even in the presence of substantial displacement. Management of these injuries with open reduction and internal fixation can result in optimal functional recovery when the injury is not accompanied by damage to the articular surface of the carpal bones or by a neurologic deficit.

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