OBJECTIVE
To prospectively evaluate patient related outcomes of surgically treating perilunate fracture dislocations with a single dorsal approach.

METHODS
We prospectively evaluated 26 patients (23 males, 3 females; mean age 41 years; range, 24-68 years) that were surgically treated for perilunate fracture dislocations in our institution. The dominant wrist was involved in 17 patients. Surgery was performed within 5 days after injury. A dorsal wrist approach was performed in all patients. All fractures, when present, were treated with internal fixation with screws and ruptured ligaments were anatomically reconstructed when possible. PIN neurectomy is routinely performed. Anatomical provisional scapholunate, scaphocapitate lunotriquetrum and triquetrumcapitate fixation with Kirschner wires was, always, applied for two months. During this period, wrist immobilization in a cast was also applied. Thereafter, all patients followed the same rehabilitation protocol for, at least, 3 months. Mean follow-up was 45 months (range, 28-65 months). Clinical outcomes were evaluated on the basis of Mayo wrist score, Dash score and the ability to return to previous work.

RESULTS
At the last follow-up, the mean grip strength was 63% of the uninjured side (range 40%-88%) and the mean range of flexion was 53% and extension was 71%. Eighty-eight percent (88%) of patients returned to their previous occupation after six months. The mean Mayo wrist score was 81, accounting for excellent results in 5 cases, good in 14 and satisfactory in 7. Mean Dash score was 20.2 (range 7.5-51.7). 3 patients developed complex regional pain syndrome type I. One patient underwent secondary procedure to remove a scaphoid screw. No case of infection, wrist or finger neuropathy or tendon rupture was recorded in this series of patients.

CONCLUSIONS
Anatomic reduction is essential in perilunate fracture-dislocations and is typically obtained by open-reduction, screw and percutaneous pin fixation. Dorsal approach provides adequate visualization of the radiocarpal and midcarpal joints allowing effective reduction and stabilization. In most patients good clinical outcome is expected, with low complication rates.