

FUNCTIONAL OUTCOME OF SURGICAL STABILIZATION OF ACETABULAR FRACTURES

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INTRODUCTION:

This study demonstrates the functional outcome of the displaced acetabular fractures that have been treated operatively in 43 patients. Evaluation of functional outcome using modified Merle d'Aubigné and Harris Hips Score (HHS) and radiological outcome using Matta radiological outcome were conducted and their association to each other were determined.

METHODS:

A total of 43 patients were recruited into this study. Patients with isolated acetabular fractures were carefully chosen while those with ipsilateral complex long bone fractures, severe head injuries and spine injuries with neurological deficits were excluded. Acetabular fracture types were classified based on Judet-Letournel Classification. Postoperative anteroposterior and lateral view radiographs of the hip joint were taken and displacement if any, were measured using post-operative Matta radiological outcome. Harris Hip Score and modified Merle d'Aubigné-Postel scoring system were used to assess postoperative functional outcome via clinical visit. Results were collected and analyzed using the SPSS version 20.0.

RESULTS:

The most frequent fracture pattern for elementary type was posterior wall (30.2%) while for associated type was both columns (23.3%). Fracture pattern exhibited strong association with post-operative Matta radiological outcome (p value 0.001). The mean functional outcome of modified Merle d'Aubigné-Postel was 15.77 and HHS was 86.6. Thirty-three (76.7%) patients achieved satisfactory functional outcome with 11 patients (25.6%) were graded as excellent, 22 (51.2%) as good, 5 (11.6%) as fair, and 5

(11.6%) as poor. Nineteen (44.1 %) patients achieved anatomic reduction while 24 (55.8%) did not. Both fracture pattern and Matta radiological outcome did not exhibit association with functional outcome group. The mean time for surgical interventions was 10.8 days (ranged 2-21 days) and there was no significant association with the final functional outcome score.

DISCUSSIONS:

Early operative stabilization of acetabular fractures becomes treatment of choice; however, this is not always feasible since these patients often have various physiologic insults that require stabilization prior to treating the fracture. Severity of fracture played an important role in achieving a perfect anatomical reduction intraoperatively. Majority of elementary fracture pattern achieved anatomical reduction on initial radiographs, while majority of associated group did not, indicating that the more complex fracture pattern is, the poorer scores obtained from Matta Classification. The quality of surgical reduction is crucial in management of acetabulum fracture. Poor quality of reduction in the weight-bearing dome of acetabulum carries a poor prognosis, but anatomical reduction doesn't always result in a good outcome.

CONCLUSION:

Fracture pattern has strong contribution factor towards post-operative Matta radiological outcome, however achieving the perfect anatomical reduction is not the utmost important factor to predict the good functional outcome.

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