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Functional Outcome of Surgically Treated Fractures of the Acetabulum

Topic: Health Conditions (Nervous System, Musculoskeletal System, Cardiopulmonary System)

Hicham El Hyaoui[1], Soufiane Benheddou[1], Mohamed Ennhiri[1], Kamal Rafiqi[1], El Hassan Kassimi[2]

[1]*Department of Trauma and Orthopedics, Souss Massa University Hospital, Agadir, Morocco*
[2]*Physical Medicine and Rehabilitation Department, Souss Massa University Hospital, Agadir, Morocco*

BACKGROUND

Acetabulum fracture fixation is a technically demanding procedure. It is often difficult to approach and treat due to its anatomical location and three-dimensional structure of the bone. The purpose of this study was to evaluate the functional outcome of surgically treated acetabular fractures in our structure.

METHODS

Twenty three patients were surgically treated for an acetabular fracture between 2021 and 2024. The data was collected prospectively and retrospectively. Follow-up was a mean of 28 months (range 6-48 months) following the injury. Eighteen were males and five females. The mean age was 39.3 years (range 23-67 years). Twelve patients had sustained an associated injury, including a femoral head fracture in three. Fracture pattern included 16 simple and eight complex fractures according to the classification of Letournel and Judet. The mean time interval from injury till surgery was eight days. The surgical approaches were: Kocher-Langenbeck (19 cases), and combined extensile (4 cases). The quality of surgical reduction was scored from the post-op radiographs, and the functional outcome was assessed by the Merle d'Aubigne score.

RESULTS

The mean hospital stay was 28 days (range 6-22 days) and was related with delay for surgery and the presence of associated injuries. Four patients had Sciatic nerve palsy pre-operatively, which recovered fully in two of them. Four patients had Sciatic nerve palsy post-operatively. Perfect or near perfect reduction was achieved in 77% of the patients. Heterotopic ossification was noticed in one patient and Avascular necrosis of the femoral head in three. Sixteen patients (60%) had a good or excellent result. Radiographic evidence of osteoarthritis was observed in eight patients and four of them had undergone a hip replacement at the time of follow-up.

DISCUSSION

Most authors report that preoperative fracture displacement > 20 mm, fracture comminution, postoperative fracture reduction within 3 mm and age less than 40 years, were the predictors of the functional outcome. However, in our series we found no correlation between the radiographic score and clinical

CONCLUSION

Displaced acetabular fractures have always been a major challenge for trauma surgeons. Conservative management includes immobilization during several weeks results in a moderate functional outcome. Clinical outcome is also influenced significantly by the comorbidity of associated injuries, and not just a perfect surgical reconstruction.

Statement of Disclosures

None

Corresponding Author:
Hicham El Hyaoui
Department of Trauma and Orthopedics, Souss Massa University Hospital, Agadir, Morocco
Email: drelhyaoui.hicham@gmail.com

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