

MARGINAL IMPACTION FRACTURES OF THE ACETABULUM

Maher HALAWA¹, Fouad SADEK²

¹*Derriford hospital, Plymouth (UNITED KINGDOM)*, ²*Cairo University Hospital, Cairo (EGYPT)*

Different factors associated with an adverse functional outcome of acetabular fractures involving the posterior wall have been well documented. Among these is marginal impaction. From 1998 until mid 2006, 105 cases were prospectively reviewed to assess the functional and radiological results of simple and complex acetabular fractures associated with a posterior wall component, with special reference to the marginal impaction. Associated posterior wall components associated with marginal impaction were compared to the pattern of fractures without marginal impaction. The exclusion criteria were non-anatomic reductions i.e. >2mm displacement, avascular necrosis, deep infection, heterotopic ossification grade III, IV, chondrolysis and nerve injuries. All marginal impaction fractures were identified on the preoperative CT scan. They were openly reduced, elevated and autografted from the greater trochanter, followed by rigid internal fixation for early postoperative mobilisation i.e. CPM use. Results were assessed clinically by the modified Merle D'Aubigne and Postel score and radiologically by Kellgren and Laurence method of grading of osteoarthritis. 40 cases were excluded for the reasons above. This left us with 27 cases of marginal impaction and 38 cases of control. The average period of follow up was 35.7 months. The functional results of the marginal impaction grafting group revealed 13 (48.1%) excellent, 7 (25.9%) very good, 6 (22.2%) good and one (3.8%) fair, while the control group showed 18 (47.4%) excellent, 10 (26.3%) very good, 8 (21%) good, one (2.6%) fair and one (2.6%) poor result. The functional and radiological outcome of the posterior wall component fractures associated with marginal impaction has shown very satisfactory results in comparison with a control group in the short and mid-term period. An integral part of this is careful recognition of this injury pattern and its management as part of the open reduction and fixation.