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DHS and fibular strut graft for fixation of fresh femoral neck fracture with posterior comminutions

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Purpose: To evaluate the use of fibular grafting and dynamic hip screws for fresh femoral neck fractures with posterior comminution in young patients less than 50 years.

Methods: Between October 2011 and March 2015, 35 patients aged 20 to 50 years, 30 men and 5 women underwent fixation using DHS and fibular strut grafts for Garden grades III (25 patients) and IV (10 patients) femoral neck fractures with posterior comminution. All fractures were reduced by closed methods and no hip was aspirated. Clinical and radiological outcomes were evaluated.

Results: All patients were in the age-group of 20 to 50 years (mean, 37 years). The mean delay in presentation after injury was 1 day. The mean final follow-up for these 35 patients was 27.7 months. Healing of the femoral neck was attained in 34 cases, with an average time to union of 4.8 months (range 4 to 8 months). One patient (case 18) underwent arthroplasty due to failure of fixation. According to the Harris hip score, outcome was good to excellent in 30 patients, fair in 4 and poor in 1.

Conclusions: Posterior comminution of the femoral neck fracture is a major cause of delayed and non-union owing to the loss of the buttressing effect against the posterior rotation. When a femoral neck fracture with posterior comminution defect is anatomically reduced, only the anterior portions of the femoral neck fracture surfaces are brought into contact. In our study, no patient developed avascular necrosis of the femoral head. This could be attributed to many factors include, closed reduction, fibular grafts and DHS fixation.

Biography

Abed Al-Negery is a Medical Practitioner at Mansoura University Hospital and Abed Orthopedic Center, Egypt. He is a professional member of Egyptian Orthopaedic Association and Egyptian Oncology Association.

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