

Utility of Angled Blade Plate in Proximal Hip Fracture Non-Union

¹Ravindran Kesavan; ¹Hanif; ²Rizal; ³Low

¹Orthopedic Department, Hospital Kuala Lumpur, Jalan Pahang, Kuala Lumpur, Malaysia; ²Orthopedic Department, Hospital Columbia Asia Kajang; ³Orthopedic Department, Hospital Columbia Asia Seremban

INTRODUCTION:

Proximal femoral non-union are rare but challenging complications. Multiple studies showed regarding use of angled blade plate in association with biological and mechanical augmentation in the femoral non-union cases.

REPORT:

A 36-year-old male experienced persistent left hip pain for two years following a car accident in June 2021, resulting in left femoral neck and anterior column acetabular fractures. Initial treatment involved plating and nailing, but implant failure led to surgery at Hospital Kuala Lumpur, where a locking plate was inserted. Subsequent imaging revealed femoral neck malalignment, a broken screw, and non-union fractures, including the intertrochanteric fracture with coxa-vara deformity.

A CT prior op shows non-union of left intertrochanteric fracture with hip coxa-vara deformity. Subsequently done, plate removal, osteotomy over the femoral neck non-union region, K-wiring technique to maintain the femoral neck alignment and deformity correction, and augmentation with bone grafting with angled blade plate.

Three months post-surgery, good union was observed at the fracture site, with a stable implant, though partial weight-bearing was advised until complete bone union occurred. The case highlights the challenges of managing post-traumatic hip fractures, the complexities of implant failure, and the importance of surgical intervention to achieve proper alignment and union for functional recovery.

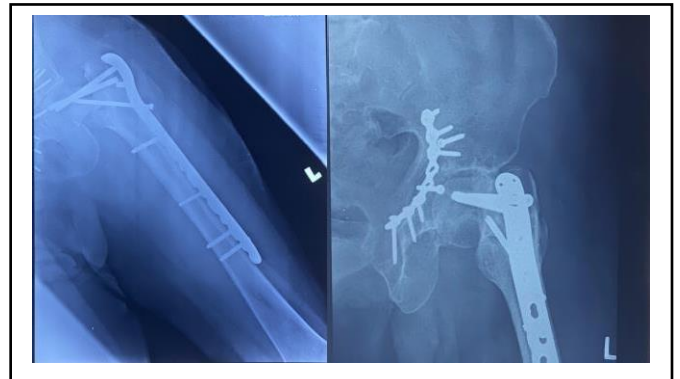


Figure 1: Proximal screw broken with non-union of femoral neck with varus malalignment of neck of femur.



Figure 2: Good callus formation over the non-union femoral neck side and neck shaft angle restored.

CONCLUSION:

Angled blade plate with bone autograft together able to correct varus malalignment in proximal femur non-union fractures which leads to higher percentage of bone union and low complications.

REFERENCES:

1. Vicenti, G., Solarino, G., Bizzoca, D. *et al.* Use of the 95-degree angled blade plate with biological and mechanical augmentation to treat proximal femur non-unions: a case series. *BMC Musculoskelet Disord* 22 (Suppl 2), 1067 (2021).