

## **FIXATION OF PATHOLOGICAL FRACTURE NECK AND TROCHANTERIC FEMUR WITH INNOVATIVE METHOD: A CASE REPORT**

Leong Jie Xiang<sup>1</sup>, Ooi Tek Zwee<sup>1</sup>, Asrul Fahmi Azizan<sup>1</sup>, Syed Addi Usmi Syed Othman<sup>1</sup>

<sup>1</sup>Hospital Tuanku Fauziah

**Introduction:** Pathological fracture neck of femur requires timely fixation to salvage the head of femur. Traditional fixation methods are found to have disadvantages in this setting due to the weak bone with lack of structural stability.

**Discussion:** A 19 years old man with no history of hip pain, alleged motor-vehicle accident sustained trauma to his right hip. CT scan right hip showed likely simple bone cyst of right femoral neck with comminuted neck and subtrochanteric femur fracture. Open reduction and internal fixation using contralateral distal femur locking plate was done within 48 hours. Intra-operatively noted bone cyst over neck and trochanter of femur, which was removed and packed with mixture of synthetic and iliac bone grafts. Histopathological examination result returned as simple bone cyst. Currently, he is able to walk unaided after 1 year with full range of motion right hip. Previous literature has shown that femoral head preserving surgery reconstruction with rigid fixation has good outcome. In this case, after adequate curettage, a contralateral distal femur locking plate was used to address both the neck and subtrochanteric femur fractures. Pathological fracture of proximal femur with simple bone cyst which is treated with curettage and reconstruction using a mixture of allo- and autograft, and a fixed angle implant can heal without local recurrence.

**Conclusion:** Early operative intervention and rigid fixation is important to preserve the femoral head by using the principles of extensive curettage, internal fixation and anatomical reconstruction with bone graft.