

## **DISPLACED PATHOLOGICAL NECK OF FEMUR FRACTURE IN YOUNG ADULTS - PROMISING OUTCOME WITH NON-VASCULARIZED FIBULA STRUT GRAFT**

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**Introduction:** Unicameral bone cyst is a common benign tumor-like lesion. 80% predominantly affects the proximal humerus and proximal femur. 50% of cases presented with pain in association with pathological fracture. About 2-3% of neck of femur fracture involve young patients. Displaced neck of femur fracture has 10-34% of non-union risk and 10-25% risk of avascular necrosis. We would like to report a case of a successfully treated displaced pathological neck of femur fracture with underlying benign bone cyst using non-vascularized autologous fibula strut graft.

**Discussion:** A 20 year old healthy gentleman presented with a painful left hip with inability to weight bear after a fall while playing football. On examination, the affected limb is externally rotated and abducted, with limb shortening. Plain radiographs revealed an area of centrally located lytic lesion with a Garden IV neck of femur fracture. Fallen leaf sign was seen in the plain CT scan. A bone biopsy with screw fixation and non-vascularized ipsilateral fibula strut graft was done. Histopathology report is suggestive of benign bone cyst. 6 months post-operative he is back playing football. Assessment reveals a normal function and painless left hip. Xray shows union of the fracture, disappearance of the bone cyst and absence of avascular necrosis.

**Conclusion:** Unicameral bone cysts spontaneously resolve at skeletal maturity[1]. Studies show that surgical curettage and cyst excision with bone graft were the optimal choice of treatment[2]. For neck of femur fracture in young patients, osteosynthesis is the preferred method of treatment. In this case we combined the method of treatment excluding curettage which shows promising result.