

## Delayed fracture Union in Post Radiation Therapy Associated Pathological Fracture

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### INTRODUCTION:

Pathological fractures are known complication of radiotherapy. The fractures also associated with delayed /non union. We described a case of a subtrochanteric femur fracture who had previous history of radiotherapy.

### REPORT:

65 years old lady presented with history of trivial fall and sustained fracture proximal 1/3 left femur. On further questioning, patient had history of receiving adjuvant Radiotherapy over left thigh 2 years prior for High Grade myxofibroma. During the admission, pt is currently in remission and under surveillance for the myxofibroma.

On Examination, there is no obvious deformity, scarring or muscle wasting seen at the fracture site. Plain radiograph showing proximal third fracture left femur. No sclerotic /lytic lesion seen. This patient proceeded with closed reduction, left long proximal femoral nail

### Figure 1: Immediate Trauma Xray

### Figure 2: Post -op 5 months Internal fixation



During subsequent follow up patient had no complaint over fracture and fixation site. On examination revealed well healed surgical scar and fracture site was non-tender. Bridging callus can be seen on the latest xray. Implant in-situ and no loosening of screws seen.

### CONCLUSION:

Radiation therapy affecting mechanical strength of the bone. Post radiation therapy fracture posts a very significant problem as it will cause vasculature damage, impairs activity osteoclast and osteoblast which leads to delayed /non union.

### REFERENCES:

Bartelstein et.al (2021). Postradiation Fractures after Combined Modality Treatment in Extremity Soft Tissue Sarcomas. Sarcoma, 2021, 1–11.