

## GOOD OUTCOME WITH LIMB SALVAGE POST WHOOPS PROCEDURE OF DISTAL FEMUR OSTEOSARCOMA

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**Introduction:** Osteosarcoma is a primary malignant bone tumor with a worldwide incidence of 3.4 per million people per year. In recent times, the management of high-grade osteosarcoma emphasized more on chemotherapy and limb salvage. We reported a case with good outcome post 'whoops' procedure after missed diagnosis of osteosarcoma.

**Discussion:** A 15 year-old female was referred for management of missed left distal femur osteosarcoma. 3 weeks earlier, she was treated for pathological fracture distal left femur with plating. However 2 weeks later, noted swelling over operated area and radiograph showed features suspicious of osteosarcoma. Implant removal and bone biopsy confirmed osteosarcoma. MRI showed features suggestive of distal left femur malignant bone lesion with pathological fracture and marrow infiltration up to midshaft level. Staging showed no distant metastasis. 6 cycles of neoadjuvant chemotherapy showed good response, after which left distal femur wide resection, osteoarticular allograft, retrograde femoral nail insertion and repair of left lateral collateral ligament was done. Left distal femur tumour 25 cm from knee joint involving all quadriceps resected with hamstring preserved. Postoperatively she was given a course of radiotherapy treatment. Eventually the allograft incorporated well with the remaining left femur and she is able fully weight bear with 20° flexion knee range of motion.

**Conclusion:** Osteosarcomas rarely presented with pathological fractures of long bones. High index of suspicion is needed to treat these cases appropriately. Inappropriate treatment otherwise known as 'whoops' procedure is associated with increased risk of amputation. Her limb was able to be salvaged as she had excellent response to neoadjuvant chemotherapy. Considering the contamination from previous surgeries, postoperative radiotherapy was given although it is not a common practice. Suspicious pathological fractures should be investigated and malignant lesions should be ruled out before any procedure. Early diagnosis and appropriate treatment at orthopaedic oncology centres is crucial for good outcome.