

## Paediatric Osteomyelitic Neck Of Femur Fracture Due To Septic Arthritis Treated With Vascularized Pedicle Iliac Bone: Case Report

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### INTRODUCTION:

Osteomyelitis is a common complication of paediatric septic arthritis, occurring up to 42% in all cases<sup>1</sup>. As debilitating as it is, the choice of treatment for osteomyelitic neck of femur fractures generally stems to two: vascularized or non-vascularized grafts. We report a case of a paediatric pathological neck of femur fracture with supero-lateral bone loss successfully treated with a vascularized iliac pedicle graft.

### CASE REPORT:

A 10 year old boy with right hip septic arthritis with delayed diagnosis for 2 weeks due to late presentation. Despite multiple arthrotomy washouts and prolonged intravenous antibiotics, he still developed osteomyelitis of femoral neck with progressive bone destruction. Pathological fracture of right femoral neck occurred while he was trying to bear weight in ward (Figure 1).

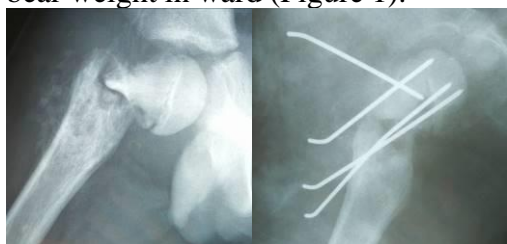


Figure 1-Osteomyelitic femoral neck fracture

Figure 2-Post graft and K-wire Day 1

### TREATMENT:

Antibiotics was continued until ESR normalized. Vascularized iliac pedicle graft from deep iliac circumflex artery via Smith-Peterson approach, both to provide vascularity and replace bone defect over femoral neck. Graft was harvested from the iliac crest, applied on the supero-lateral aspect of femoral neck and fixed with K-wires (Figure 2). Post operatively, patient was put on a hip spica in hip flexion 45° and neutral abduction. He developed a surgical site infection of his hip wound, which grew *Staph. Aureus* and subsequently healed completely after a short course of oral antibiotics. Hip spica was removed after 2 months upon patient's request. Radiological union noted 3 months post-

operatively. Patient able to partially weight bear 6 months after operation. However there is varus malunion of femoral neck with neck shaft angle of 90° (Figure 3). We plan for corrective osteotomy when patient almost achieve skeletal maturity.



Figure 3 – Post operative 6 months x-rays showing graft union

### DISCUSSIONS:

Treatment of osteomyelitic femoral neck fractures using vascularized iliac pedicle grafts are well documented in several studies<sup>3,4,5</sup>. Peruchi et.al found that despite possibility of failure, vascularized bone grafts achieved better cellular survival, earlier consolidation, maintenance of bone mass and higher resistance to infection in relation to non-vascularized bone grafts. In our patient, use of this method is able to solve both bone defect and union problem of pathological femoral neck fracture.

### CONCLUSION:

Vascularized pedicle grafts is a suitable option for treatment of paediatric pathological femoral neck fractures as it provides better capacity for osteogenesis, osteoinduction and osteoconduction compared to non-vascularized bone grafts<sup>2</sup>.

### REFERENCES:

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