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CASE REPORT

UNIQUE CASE REPORT OF SUBTROCHANTERIC FRACTURE FEMUR IN ABOVE KNEE AMPUTEE TREATED WITH PROXIMAL FEMUR LOCKING COMPRESSION PLATE

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ABSTRACT

Above knee amputee with subtrochanteric fracture femur is rare with an overall incidence of 3%. Many of these fractures are missed or have been delayed in diagnosis. Injuries range from fractures around hip to distal femur fractures. Most of these fracture are managed by non-operative methods with the exception of unstable pertrochanteric fractures of femur. Here is an unique case of subtrochanteric femur fracture in a lower extremity above knee amputee with delayed diagnosis managed by operative fixation with locking compression plate. Functional outcome was satisfactory to attain adequate level of mobility.

INTRODUCTION

Overall incidence quoted in literature is 3% in a population of lower extremity amputees[1]. More than one fourth of these fractures had a missed or delayed diagnosis[1]. Stump fractures encountered were distal femur fractures and fractures around hip[1]. Most distal femur fractures were treated non operatively and fractures around hip treated with operative means[1].

Most of the fractures were managed by non operative methods, with the exception of unstable intertrochanteric fractures and displaced fractures of femoral neck[2]. None of the stump fractures needed reamputation through fracture site[2]

Case

32 year Male involved in Railway accident was treated at local District general hospital with Guillotine amputation for severely contaminated crush injury of right lower limb. He self-referred to higher centre for management of femur infected stump.

He presented 6 weeks after injury with painful stump and discharging stump wound. Initial investigations revealed Low Haemoglobin 6.8 gm/dl, TC 11,220, Platelet count 3 lakhs, Culture swab revealed Staph. Aureus and Pseudomonas which was sensitive to Piperacilin, Flucloxacillin, Ceftrioxone, Amikacin and Ciprofloxacin. X-ray of stump revealed Subtrochanteric fracture femur-Fielding type 3, Seinscheimer type 2 A, Russell Taylor type 1 A.

Stump was revised to Above Knee amputation with fish mouth flaps. Regular dressings and antibiotics have controlled infection in stump wound.

Two weeks later, following through investigatory work up, correcting anaemia and peer review discussion patient was posted to elective OT. Challenges at hand were Soft tissue contracture, skin incision, distorted anatomy, Malunited femur fracture, type of surgical procedure and type of implant. Options available were Conservative management, Short PFN, Long DHS and Proximal Femur LCP.

Patient preferred a mobile limb prosthesis which in turn required stable stump, hence operative option was chosen following informed consent from patient was obtained. Patient was explained risk of repeat infection requiring higher amputation and associated mortality, Pulmonary embolism,

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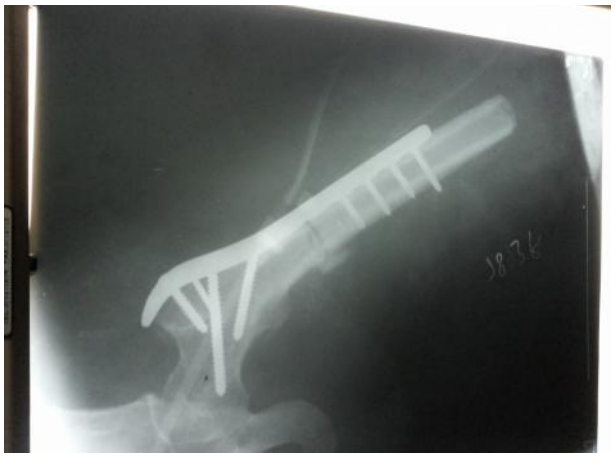
Deep Venous Thrombosis, non-union, malunion and general anaesthetic complications including death.

Intraoperatively difficulties included severe soft tissue contracture requiring soft tissue release including iliopsoas percutaneous release and osteoclysis to address malunion of femur.

Post operative period was uneventful with no complications of wound infection, DVT or any other complications. Suture removal was done on 10 th day and physiotherapy was commenced on day 5 with active hip flexion extension exercises.

RESULT

Following healing of stump wound and union of fracture at 2 months patient was counselled for well fitting limb prosthesis and physical training given for appropriate use of prosthesis. Follow up was done at 1 month, 6 month and 12 month for fracture union. X-ray confirmed complete union. Clinical evaluation revealed full extension and 130 degrees of hip flexion. No stump complications were noted and pt was very satisfied with stump and prosthesis.



DISCUSSION

Femoral fractures in patients with lower extremity amputations is relatively rare (reported incidence 2.35%- 3 %)[3]. Lack of adequate support and balance, and osteoporosis on amputation side may explain predisposition to fracture[3]. Simultaneous fracture of femur was missed in 1/4 of lower extremity crush injuries[1].

Closed reduction and cast immobilisation of distal femur and shaft femur fractures resulted in 100 % union rates with all patients regaining previous ambulatory levels and prosthesis skills[3]

82 % of all patients using prosthesis before fracture resumed use of prosthesis[2]

Final rehabilitated status of the dysvascular amputees was poorest- one half of those who were previously household ambulators remained wheelchair confined postinjury[1].

CONCLUSION

Severe trauma including extremity crush injuries has grave prognosis if untreated or mismanaged. Following initial stabilisation and correction of heamodynamic status patient needs thorough secondary survey of all injuries. Though rare, femur fractures in above knee amputee stumps could be well managed as in our case and attain functional level to patients.

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