

Ipsilateral Hip Fracture in Above Knee Amputee - Intra-operative Challenges

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INTRODUCTION:

Hip fracture is a debilitating condition, even more so in an above knee amputee. Surgical aim remains the same, that is, to return the patient back to ambulatory status using prosthesis. Fixation of hip fracture in a lower limb with prior amputation poses a significant challenge as traction and rotational control through the boot piece in a conventional traction table is not applicable. There have been a lack of published strategies to overcome this intra-operative challenge. Here, we describe our approach in positioning a patient on a conventional traction for cephalomedullary fixation for intertrochanteric hip fracture with ipsilateral above knee amputation.

REPORT:

Our patient is a 72 years old, gentleman who underwent a left above knee amputation more than 40 years ago due to crush injury, and is fully ambulatory with a prosthesis. He suffered a comminuted intertrochanteric fracture of left hip (Figure 1) due to a fall in the washroom. We planned a cephalomedullary fixation using Proximal Femoral Nail Antirotation - II (Synthes), after determining pre-operatively that the proximal bone fragment could accommodate the entire length of the nail length.

Intraoperatively, Steinmann pin was inserted over distal femur. This provide traction force to help with reduction throughout the surgery. As for rotational control, an assistant could provide adequate and easy control by holding on the Steinmann pin over the sterile drape during the procedure. (Figure 2).

The procedure was straight forward, completed by a medical officer in under an hour. The postoperative radiograph showed satisfactory reduction and fixation (Figure 3). He recovered well and was able to return to pre-injury functional status upon review at 3 month post-operation.



Figure 1: Preoperative anteroposterior Pelvic radiograph (left) and lateral hip radiograph (right)

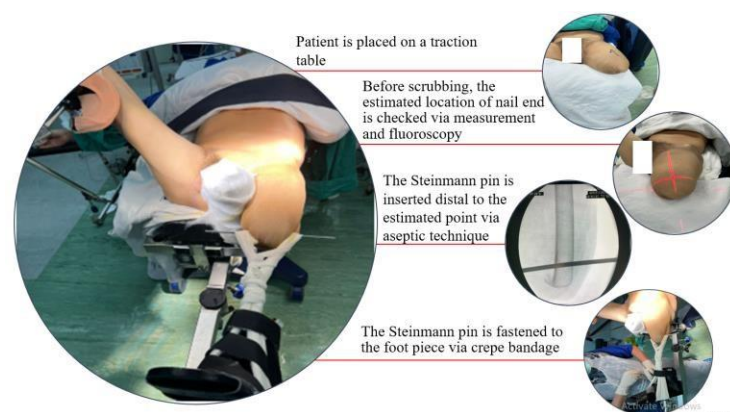


Figure 2: Intraoperative photograph demonstrating the setup of the patient.

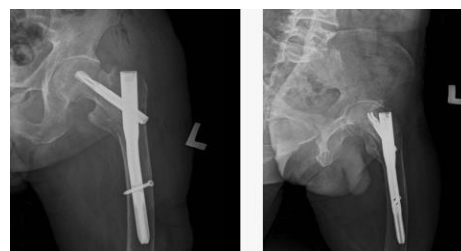


Figure 3: Check radiographs. Anteroposterior hip radiograph (left) and lateral hip (right)

CONCLUSION:

Steinmann pin fixation can be used successfully to provide traction and rotational control in hip fracture reduction in patient with ipsilateral amputation.

Reference:

Haleem, S., Yousaf, S., Hamid. (2021). Characteristics and outcomes of hip fractures in lower limb amputees. *Injury*