

FEMORAL DISTRACTOR SAVES THE DAY! A CASE REPORT.

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INTRODUCTION:

Intramedullary nailing in a polytrauma patient with concomitant unilateral injuries can be challenging. Traction table usage may worsen adjacent fracture displacement. Hence, we would like to present a case of how femoral distractor became an indispensable tool for IM nailing of a patient with traumatic brain injury and 1-month history of open left midshaft femur fracture and adjoining PCL avulsion fracture.

REPORT:

A 24-year-old man sustained a motor-vehicle accident and was diagnosed with massive subdural hemorrhage, open fracture midshaft right femur with closed right PCL avulsion fracture in February 2023. Decompressive craniectomy and femoral external fixator were performed, and he was stabilized in ICU care for 2 weeks. The definitive surgery for the femur fracture was done after a month in two stages. The first stage involved removal of the external fixator and screw fixation of the PCL avulsion. After confirming there was no pin-site infection and normal infective parameters, second stage surgery, femoral IM nailing, was performed. We utilized the femoral distractor to supplement the traction and assist in fracture reduction. Post-operatively, he was able to transfer to wheelchair and was discharged well in mid-March 2023.

Figure 1: Pre-operative imaging

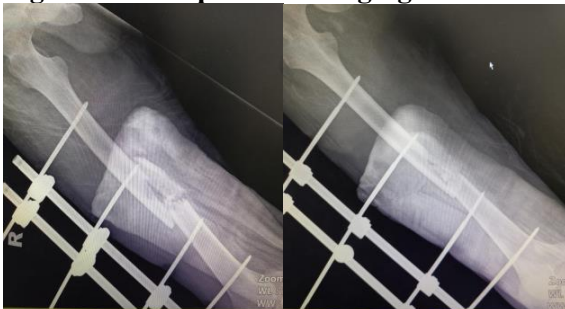


Figure 2: Post-operative imaging



CONCLUSION:

There are a few objectives of the application of femoral distractor in this case. Firstly, it averts displacement of the PCL avulsion screw fixation by preventing over-traction. In the presence of florid callous formation, closed reduction can be difficult to achieve. Usually, these patients would require an open reduction and thereby increasing the risk of surgical site infection. By using femoral distractor, it helps to gradually reduce the fracture while maintaining direct traction on the femur, simplifying the IM nailing procedure. Hence indirectly, it reduces operative time and limiting intra-operative blood loss¹.

In conclusion, we believe one should bear in mind the readily available femoral distractor as a safe and reliable reduction tool in difficult cases.

REFERENCES:

1. Baumgaertel, Fred, et al. "Technique of using the AO-femoral distractor for femoral intramedullary nailing." (1994)