Ipsilateral Floating Knee with Femoral NeckFracture Fixed Primarily

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INTRODUCTION:

Ipsilateral fractures of the femur and tibia have been called "floating knee" injuries and may include combinations of diaphyseal, metaphyseal, and intra-articular fractures. These are often high-energy injuries and most frequently occur in the polytrauma patient.1,2 Many of these fractures are open, with associated vascular injuries. They were originally classified by Blake and McBryde in 1975 as Type I (extraarticular) or Type II (articular). Subsequently, Fraser et al9 added subclassifications to Type II fractures to indicate tibial plateau injury (IIa), distal femur (IIb), or articular involvement of both sides of the knee (IIc). In isolation, both ipsilateral femoral neck and shaft fractures and floating knee injuries present various treatment considerations that surgeons must take into account; yet, reports of patients presenting with both injuries are rare.

REPORT:

Case report of 17 years old gentleman alleged motorvehicle accident, motorbike and car. Post trauma patient had loss of consciousness, no retrograde amnesia or ENT bleeding. Patient was brought in to our centre and in emergency noted patient complaint of pain over right lower limb, swelling over right lower limb.

On examination, GCS full and primary and secondary survey all cleared. Left lower limb ROM full. Right lower limb deformity over right knee and shin, compartment soft, pulses palpable DPA and PTA, sensation intact.

Plain radiographs of pelvic, hip, knee and tibia and fibula (Figure 1), noted fracture transcervical neck of right femur visualized clearly, fracture supracondylar right femur with intercondylar split, comminuted fracture midshaft right tibia with large fragment. CT knee was done for preoperative planning to look at fracture configuration and intraarticular fragment. Patient underwent operation and femoral neck, supracondylar femur with split and midshaft tibia fracture was fixed. Post operative xray, (Figure 2) femoral neck well aligned, supracondylar fracture reduced with joint congruency achieved and tibia alignment is good.

Figure 1: Plain radiographs of pelvic, hip, knee and tibia andfibula

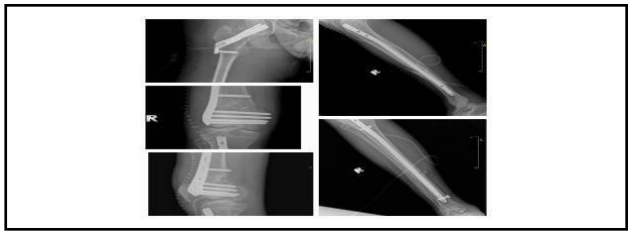

Figure 2: Post operative X-ray

Ipsilateral femoral neck and shaft fractures with floating knee are very rare. In this case, the femoral neck fracture was approached using Femoral Neck System then supracondylar fracture was fixed with distal femoral locking plate and finally the tibia was fixed with interlocking nail. The is no direct consensus which needed to be fixed, however the femoral neck should be addressed first.

CONCLUSION:

In summary, each fracture in floating knee with femoral neck fracture is unique and very rare, therefore treatment should be decided based on individual analysis, extend soft tissue injury and surgeon preference. In our case, all fractures was closed and therefore was fixed primarily with FNS, distal femoral LCP and interlocking nail.

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