

A new concept of surgical approach for posterior tibial plateau fractures- case series

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Introduction: Tibial plateau fractures represent a complex injury to the knee. High-energy fractures of posterior tibial plateau always need surgical treatment. Treatment goals applied to tibial plateau fractures include anatomic articular surface reduction, restoration of the anatomic axis, and preservation of the menisci. The approach should not devitalize soft tissues or cause further injury to surrounding structures. Generally, fracture with depression of posterior aspect of the proximal tibia cause significant therapeutic problems. Posterolateral fractures usually cause massive depression and destruction of the chondral surface. Surgical exposure of these fractures from anterior requires major soft tissue dissection and has a significant complication rate. However incomplete restoration of the joint surface results in chronic problems. Different from previous posterolateral exposure via transfibular osteotomy approach, we here present new specific approaches without a fibular osteotomy for posterior fracture types avoiding large skin incision.

Materials and Methods: 6 cases with posterior tibial plateau fractures had ORIF in the authors' institution from Nov 2011 to Jan 2012 by a single experienced surgeon.

Results: We performed posterolateral approach without fibular osteotomy to achieve internal fixation with T shape buttress plate. One specific complication occurred related to these exposures was surgical wound infection and received debridement postoperative two weeks; others no specific early complication noted, i. e. no skin slough, no nerve palsy. The mean duration follow-up was 3 months in the early following, all had satisfactory reduction of the articular surface and acceptable alignment.

Discussion: The posterior tibial plateau fracture is relatively uncommon and few studies have concentrated on it so far. Another way to approach the posterolateral plateau is without a fibular osteotomy. Absence of an osteotomy makes it more difficult to visualize the tibial fracture at the level of the fibular head; however, this approach is preferred as it avoids the risk of a nonunion at the fibular osteotomy site and successfully managed using this approach with direct reduction and buttress fixation of articular fragments. Quality of articular reduction is one factor that influences short-term functional outcome.

A intra-operative self-made traction device in acetabulum fracture

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Introduction: Acetabulum fracture is a complex and challenging issue to orthopedic surgeons. If open surgery is indicated, the result was influenced by the quality of reduction, especially the anatomic reduction of the hip joint. We employed an intraoperative traction thru the distal femoral pin and fracture table to provide a more convenient way to perform the surgery in prone position.

Materials and Methods: We use this device in patients with of posterior wall, posterior column, combined fracture of the posterior wall and column or T shaped fracture.

Results: Easier to assess the reduction of joint surface and to remove the fracture debris inside the joint.

Discussion: Skeleton traction was indicated in most acetabulum fracture as a temporally device to stabilize the fracture and can be applied easily and safely at ER. We use the original traction pin and connected to the fracture table. So the degree of traction can be easier to adjust and maintain.