Abdul Qadir, Case Rep Surg Invasive Proced 2018, Volume 2

COMPLICATED TIBIAL PLATEAU FRACTURES IN YOUNG PATIENTS: FUNCTIONAL OUTCOME WITH DUAL PLATING VIA A2 INCISION TECHNIQUE EXPERIENCE OF TWO PUBLIC SECTOR HOSPITALS OF KARACHI, PAKISTAN

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Motorbike accidents contribute one of the most important factors of tibial plateau fracture among young populations in Karachi Pakistan. Most surgeons feel challenging to treatment complicated bi-condylar fractures of the tibial plateau. This prospective study was designed to evaluate the functional outcomes of dual plating via A2 incisions technique for the fixation of complicated bi-condylar tibial plateau fractures in young patients in Karachi Pakistan.

Method: This prospective study include 94 cases of Type V and VI tibial plateau fractures of young patients operated between January 2014 and Dec 2016 conducted in two public sector hospital of Karachi Pakistan. Exclusion criteria include patients with multiple fracture on same side or same bone, age more than 45 years, open contaminated fracture and patients with head injuries. All cases were operated either by lateral locking plate fixation by anterolateral approach or double plating through double incision. All cases were followed for a minimum of 24 months radiologically and clinically. The statistical analysis was performed using software SPSS 20.0 to analyze the data.

Results: A total of 94 patients (45 Single Plating and 49 Dual Plating) were operated during the study period of two years. However, four patients (four single plating and zero dual plating) were lost during follow up who could not be tracked. Both groups were somewhat similar in relation to the age, mechanism of injury, fracture pattern and soft tissue injury. Preoperatively, there was a significant increase in surgical time with the dual plating group; however, the mean time of reduction between the two groups was not significant. Decision to put bone graft was at the choice of the operating surgeon and was an intraoperative decision with 74 (78.7%) patients receiving bone graft. Postoperatively, there was no immediate difference in between the groups considering the malignant and reduction. It took approximately four to five months for the fractures to get united. The was no malunion, nonunion or implant failure seen among those patients. There were 10 cases with superficial infection in wounds of dual plating group which were treated with culture sensitive antibiotics for average two weeks, healed subsequently. There were three patients found having incidence of deep infection in a double plating group, where in two patients were positive with *Staphylococcus aureus* and one patient with *E.coli* was isolated. Extensive wound irrigation and lavage with antibiotic cement beads was given. Repeated irrigation and lavage was done again after two weeks with removal of beads followed by prolonged course of antibiotic therapy for six weeks after which the infection resolved. A total of 38 (77%) patients in a double plating group regained full flexion (135°) and full extension (0°) with a good alignment and no pain and instability as compared to single plating group, seen in 30 (66%) patients at follow-up.

Conclusion: Dual plating by two incision method resulted in better functional outcome regarding limb alignment and range of movements at knee joint with an acceptable soft tissue complication rate in young patients.

BIOGRAPHY

Abdul Qadir is a Surgeon specializing in orthopedic surgery with an emphasis on advanced techniques in this field disciplined and confident doctor with Saudi Arab license and board certification in surgery. More than 04 years of experience in hospital and clinical settings.

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