

Single Incision Versus Double Incision Plates Fixation Depending on Three-Column Classification for Treatment of Tibial Plateau Fracture (Type V and Type VI).

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Abstract

Aim: Randomized control study to compare the functional and radiological results of single incision with double incision for treatment of complex tibial plateau fractures Schatzker types V and VI.

Material and Methods: Between January 2016 and January 2018, fifty patients with Schatzker types V and VI tibial plateau fractures underwent plate fixation using single anterolateral incision (group A) alternatively with double anterolateral and posteromedial incision (group B). X-ray and CT done for all patients then both groups were evaluated for fracture healing time, New Knee Society Clinical Rating System, (NKSS) and radiological assessment as femoral tibial angle (FTA), tibial plateau tibial shaft angle (TPA) and posterior slope angle (PSA). The mean age of patients was 38.75 ± 11.40 , 39.65 ± 8.20 years in group A and B respectively, the mode of trauma was MCA in 16 patients (64%) of group A and 17 patients (68%) of group B, the mean follow up period was 14 months in both groups.

Results: the mean duration of bone union was 19.25 ± 3.80 and 14.70 ± 4.76 weeks in group A and B respectively and according to NKSS there were 11 patients (44%) had excellent results, 9 patients (36%) had good results and 5 patients (20%) had poor results in group A while group B achieved excellent results in 22 patients (88%), 2 patients (8%) had good results and one patient (4%) had poor result.

Conclusion: Double incision approaches depend on three-column plate internal fixation for the treatment of complex tibial plateau fractures is effective to gain anatomical reduction, rigid internal fixation and early functional motion when compared with single incision fixation.

Key words: Bicondylar tibial plateau fracture, Double plate fixation, Three-column classification.

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