

Optimization of the Staged scheme for the Treatment of complicated (OTA C3) Tibial Pilon Fractures

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Introduction/Purpose: To explore and evaluate the optimization operative strategy reported on our results using a direct approach with posterior malleolar plating in combination with staged anterior fixation in complex pilon fractures.

Methods: 43 patients were divided into group A (23 cases, posterior plating and external fixation for stage I, ORIF through anterior approach for stage II) and group B (20 cases, closed reduction and external fixation for stage I, ORIF through anterior-posterior approach for stage II) between 2013 and 2014. With an average follow-up of 16.6 months,

Results: The statistics showed that there were statistically significant differences ($P < 0.05$) between two groups in the time before definitive surgery and the operative time of the stage II surgery, but in the time before initial surgery and the operative time of the initial surgery ($P > 0.05$). The AOFAS and MLFAS scores in the group A were better than ($P < 0.05$) the Group B. 4 patients in the group A had some evidence of symptomatic arthrosis compared with 6 in the group B. The rate of tourniquet paralysis for the group A was 4.35% versus 35% ($P < 0.05$) for the Group B.

Conclusion: The optimization operative strategy offers direct visualization for reduction, and allows the anterior components to be secured to a stable posterior fragment at a later date. The staged strategy not only obtains the leg fascia chamber decompression, also shortens the waiting time for operation, reduces reduction difficulties in definitive operation.

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