

15th International Conference on
Orthopaedics, Arthroplasty and Arthroscopy

September 22, 2022 | Webinar

Received date: 19.09.2022 | Accepted date: 20.09.2022 | Published date: 22.09.2022

Open reduction internal fixation versus external fixation with limited internal fixation for displaced comminuted closed pilon fractures: a randomized prospective study

Alham Qureshi¹, Rayan Ahmed², Kotb Ahmedm², M Elmoatasem ElHussein², Samir Shady², Tamer A El-Sobky², El-Hawi Ezzat², and Mahran Mahmoud²

¹Imperial College Healthcare NHS Trust, UK

²Ain-Shams University, Egypt

Background: Pilon fractures involve the dome of the distal tibial articular surface. The optimal treatment for high-energy pilon fractures remains controversial. Some authors advocate the use of open reduction and internal fixation (ORIF) to avoid articular incongruence. Others advocate the use of bridging external fixation with limited internal fixation (EFLIF) to reduce soft tissue complications. Literature reports of prospective studies comparing the radio clinical outcomes of ORIF and EFLIF in high-energy fractures are scarce. Retrospective studies have their limitations because of insufficient randomisation. The objective of this randomised prospective study is to compare the clinical, radiologic, and functional outcomes of displaced and comminuted closed pilon fractures, Rüedi and Allgöwer type II and III, treated by either ORIF or EFLIF.

Materials and Methods: Forty-two patients were selected for the study. Twenty-two patients were subjected to ORIF and 20 patients were subjected to EFLIF. We used the American Orthopaedic Foot and Ankle Society score as a standard method of reporting the clinical status of the ankle. Patients were followed-up clinically and radiologically for over 2 years after the surgical treatment.

Results: The results of ORIF and EFLIF in the treatment of high-energy pilon fractures are equally effective in terms of functional outcomes and complication rates in the short term.

Conclusion: Soft tissue integrity and fracture comminution seem to have a significant influence on outcomes of intervention. A prospective multicentre study with a larger sample size that controls for other associated variables and comorbidities is warranted.

Recent Publications

1. Korkmaz A, Ciftdemir M, Ozcan M, Copuroğlu C, Sandoğan K. The analysis of the variables, affecting outcome in surgically treated tibia pilon fractured patients. *Injury* 2013 Oct;44(10):1270–4.
2. Amorosa LF, Brown GD, Greisberg J. A surgical approach to posterior pilon fractures. *J Orthop Trauma* 2010 Mar;24(3):188–93.
3. Conroy J, Agarwal M, Giannoudis PV, Matthews SJ. Early internal fixation and soft tissue cover of severe open tibial pilon fractures. *Int Orthop* 2003;27:343–7.

Biography

Alham Qureshi is a junior doctor working in trauma and orthopedics in the North West of England. She obtained her medical degree from the University of Glasgow in 2016. She is currently working at Royal Blackburn Hospital. Her interests include trauma, hand surgery, diversity and inclusivity, and yoga.

a.qureshi1@nhs.net