

Clinical Outcomes of Combined Fixation Strategy Using a Mini Plate in Complex Patellar Fracture

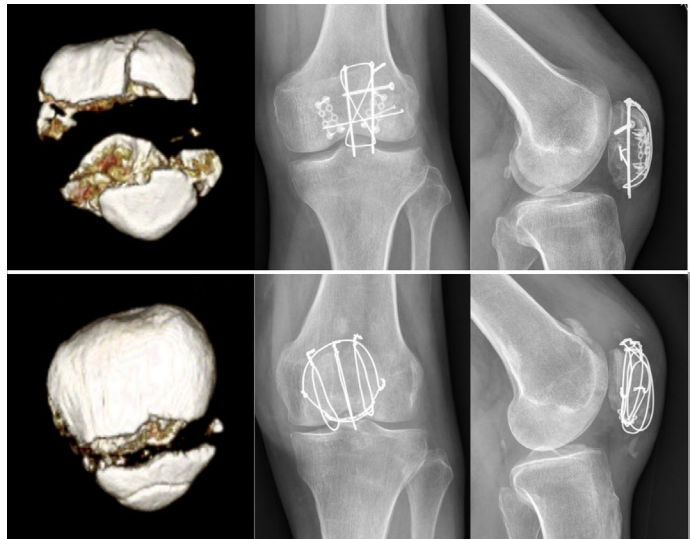
Jae-Woo Cho, MD; Jin-Kak Kim, MD; Beom-Soo Kim, MD; Do-Hyun Yeo, MD; Gi-Ho Moon, MD; Jong-Keon Oh, MD, PhD
Korea University Guro Hospital, Seoul, SOUTH KOREA

Purpose: The purposes of the study were (1) to introduce various applications of mini-plate augmented fixation and (2) to evaluate its clinical outcomes for complex patellar fracture.

Methods: Two orthopaedic trauma surgeons used single mini-plate augmented fixation technique managing complex patellar fracture from January 2014 to January 2016. Comminuted articular fracture was managed by tension band wiring augmented with anterior cortical plating. Comminuted inferior pole fracture was managed by separate vertical wiring augmented with rim plating. The patients were followed at regular intervals for a minimum of 12 months. The primary end point was radiologic union. A secondary end point was complications-related operation. Functional outcomes including range of motion were also evaluated.

Results: 33 patients were followed for an average of 14 months (range, 12-27). Average patient age was 56.6 years, and there were 18 male and 15 female. 25 patients were OTA 34 C fractures (C 3.2: 13, C 3.1: 9, C 2.2: 2, C 2.1: 1). 8 patients were OTA 34 A1 fractures (comminuted: 6). Tension band wiring with augmented anterior cortical plating was performed in 25 patients. Separate vertical wiring with rim plating was performed in 8 patients. The primary union rate was 94% (31 of 33 patients). Mean time to union was 3.2 months. Two patients required additional surgery resulting from acute postoperative infection and irritation of loosened screws.

Conclusion: Mini-plate augmented tension band wiring or separate vertical wiring could be a versatile and useful technique for complex patellar fracture fixation.



The FDA has stated that it is the responsibility of the physician to determine the FDA clearance status of each drug or medical device he or she wishes to use in clinical practice.