



البحث الرابع

Outcome of Transverse Patella Fractures Fixed with Cannulated Screws and Stainless Steel Tension Band Wiring

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Background: Tension band supplemented by K-wires has long been the definitive technique for patellar fractures fixation. However, it is not without drawbacks. The stainless-steel cable-cannulated screw tension band technique, may shorten healing time, decrease complications and provide an early range of knee motion. Herein, the current study evaluates the clinical and radiological outcomes of this surgical modality.

Patients & Methods: This prospective study was conducted on 21 patients (13 males and 8 females) with transverse fracture patella from June 2017 to April 2021. The fixation consisted of two 4.0-mm parallel partially threaded cannulated cancellous screws with a figure-of-eight stainless steel tension band wiring. Follow-up was at least 10 months. Assessment criteria by Lysholm score for knee function, ROM, VAS for pain, fracture reduction, fracture healing time, and complication rates. After 3 postoperative weeks, the slab was removed and immediate rehabilitation was commenced.

Results: The average Lysholm scores were 82.9 ± 4.4 , 87.8 ± 5.3 , and 92.7 ± 3.6 after 3, 6, and 10 months, respectively. VAS scores for pain were 2.6 ± 3.0 , 1.4 ± 2.6 , and 0.5 ± 2.3 at 3, 6, and 10-month, respectively. The patients had gained total ROM after 3, 6, and 10 months. The mean fracture healing time was 2.1 months (range, 1.5 - 3.1 months). Two patients experienced skin irritation by wire tails.

Conclusion: The stainless steel cannulated screws and tension band construct provide a good alternative in the treatment of transverse patellar fractures. It could yield stable fixation, low complication rate while providing early mobilization and accelerated rehabilitation.