

## **Summary**

30 surgically high-risk patients who presented to our clinic with trochanteric fractures of the femur were treated with External fixator. Of the patients, 18 were female, 12 male. Their mean age was 77 years (range 65–86 years), the age group (76-80) years predominated. Fractures were classified according to the system proposed by Evan's. 4 fractures were type I, 12 were type II, 4 were type III, 6 were type IV, 2 were type V, and 2 were type VI. 26 of fractures were due to low energy trauma and 4 were due to high energy trauma. 18 fractures of the left Trochanteric femur and 12 fractures of the right trochanteric femur. No patient was operated on as an emergency. The patients were operated on an average of 2 weeks (range 1–3 weeks) after the trauma. Anaesthesia was chosen according to the patient's condition and ASA grade. The patient included were 18 ASA 3 and 12 ASA 4. Operations were performed with epidural anaesthesia in 14 cases, with spinal anaesthesia in 8, and with lumbar plexus block and local anaesthesia in 8. All of the patients were allowed to sit in bed on the 1st postoperative day and to allow walking with 4 legs frame in the first three weeks after operation. The mean hospitalization time was 3 weeks (range 2–4 ). The mean follow-up time was 6 months. Final assessment was performed by Foster modification of Murray and Kennedy's anatomical and functional classification criteria. The external fixator used in this study was the Orthofix Pertrochanteric Fixator (6 cases), The Dynamic External Fixation System "BAUMER, ORTOPEDIA"(4 cases), and Mitkovic dynamic external fixator "by Ei-FMD"(18 cases). On the fracture table following closed reduction of fracture fragments, three (or two) Schanz screws were inserted into the femoral head to a distance of 10 mm from the subchondral bone. C-arm was used for the closed reduction of the fractures and insertion of the Schanz screws into their proper position. Two (to five) Schanz screws were also inserted into the diaphysis of the femur.

The mean operation time was 28 min (range 15–45 min). The mean C-arm usage period was 66 s (range 45–100 s). Blood transfusion during the operation or open surgical procedure was not required in any patient. Union occurred in all cases. The mean time to union was 12

weeks (range 9–20 weeks). Results were anatomically excellent in 22 patients, good in 2 patients, fair in 5 patients, and functionally excellent in 16 patients, good in 12 patients, and fair in 2 patients. Pin-tract infection was seen in 10 patients, all were superficial and no deep infection was seen. Infections were treated by antibiotic therapy and daily cleaning. The fixator was not removed due to infection in any patient. Acetabular penetration, loosening or failure of Schanz screws were not seen in any patient. Bending of the most proximal screw at 4th week was detected in 2 patients. Varus alignment was seen in 2 patients, and shortening was found in 6 patients (mean=1.5cm). No patient died while hospitalized but 3 died in the 6 months follow-up period.