

Fragility Fractures of the Pelvis: Operative Treatment Is Safe in Patients with Failure of Conservative Treatment and with Displaced Fractures*Daniel Wagner, MD; Erol Gercek, MD; Pol Maria Rommens, MD**University Medical Center Mainz, Department of Orthopedics and Traumatology, Mainz, GERMANY*

Purpose: There is an increasing number of fragility fractures of the pelvis (FFPs). There is still lack of knowledge in the treatment of these patients. The goal of this study was to evaluate the treatment strategy of operating on displaced fractures (FFP type 3 and 4) as well of primary conservative treatment of nondisplaced fractures (FFP type 1 and 2).

Methods: All patients with an FFP admitted to our unit from mid2018 to mid2020 were prospectively included in this study (n = 110). 14 patients had an isolated anterior pelvic ring fracture (13%, FFP type 1), 59 had posterior nondisplaced fractures (54%, FFP type 2), 11 had a posteriorly displaced fracture (10%, FFP type 3), and 26 had posterior bilateral displaced fractures (23%, FFP type 4). Patients were followed up for 1 year.

Results: Included were 99 females and 11 males with a mean age of 79.2 years. The median length of stay was 11 days; in-hospital general complications occurred in 27% of patients. One-year mortality was 12%, and 15% suffered another osteoporotic fracture. Half of patients with posterior pelvic ring fractures were operated primary, and 11% of conservative treated patients underwent surgery after failure of conservative treatment. They more often presented with delay (33 vs 0 days, $P < 0.001$), had a longer stay in hospital (median 15 vs 9 days, $P < 0.001$), and had more general complications such as urinary tract infections (34% vs 17%, $P < 0.001$). Three patients underwent reintervention (6%; 1 hardware removal, 1 anterior stabilization of a previously nondisplaced fracture, and 1 debridement for infection). One-year mortality rate was lower in operated patients (7% vs 13.5%, $P = 0.38$) with a lower rehospitalization rate for various reasons (33% vs 49%, $P = 0.393$).

Conclusion: Despite longer stay in hospital and higher general complication rate, operatively treated patients had lower rehospitalization rate and a better survival at 1 year. Surgical treatment can be recommended in patients with displaced fractures and such with failure of conservative treatment.