

Epidemiology of ankle fractures - how many fractures can be treated conservatively?

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Background: This study was designed to see if biomechanics-based criteria for stability are useful in choosing between nonoperative and operative treatment, and how many ankle fractures can be treated conservatively.

Materials and Methods: One hundred and sixty ankle fractures in skeletally mature patients were retrospectively analyzed to obtain an epidemiological profile in a population of about 130,000. One hundred and thirty patients had follow-up times of more than two years. A decision between operative and conservative treatment was made by the surgeon-on-duty, based on our stability criteria. Fractures were classified according to AO/OTA and Lauge-Hansen systems. Clinical outcome was assessed using the scoring systems of Olerud–Molander, the RAND 36-Item Health Survey and the Visual Analogue Scale (VAS), measuring pain and function.

Results: Conservatively treated patients had more displacement of the distal fibula after treatment, but less pain and better Olerud–Molander and VAS functional scores. Independent factors for worse outcome were female gender, older age, unstable fracture and co-morbidity. No conservatively treated patients needed operative fracture fixation during follow-up.

Conclusions: Stability-based fracture classification seems to be useful in decision making regarding method of treatment and about 50% of ankle fractures can be successfully treated conservatively. Stress tests are unnecessary when there are no clinical signs of delta ligament injury. Once the decision has been made to treat a stable fracture conservatively there is no need to repeat ankle radiographs.