Evidence in focus

Publication summary

Gavaskar AS, et al. *J Orthop Trauma* (2018)*

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INTERTAN® provides superior functional results and lower reoperation rates, compared with a helical blade design, in the treatment of unstable trochanteric fractures in elderly patients

At one year follow up, INTERTAN also had lower incidences of varus collapse, medial blade migration, and cut out

Study design

- A retrospective, multicentre, single-surgeon study of 100 elderly patients (aged >60 years) with unstable trochanteric fractures (classified as AO – 31A2 and A3) treated with either INTERTAN or PFNA–II (Synthes)
- There were 50 patients in each group, who were matched for all relevant characteristics, with functional and radiological assessment occurring at one-year follow up by blinded investigators

Key results

- At one year, a significantly greater proportion of patients treated with PFNA-II required revision surgery than those treated with INTERTAN (Figure)
- The PFNA-II group also had a higher incidence of varus collapse (5 vs 1), medial blade migration (2 vs 0), and cut out (2 vs 1) than the INTERTAN group, though these did not reach statistical significance
- INTERTAN was statistically superior to PFNA-II at one year for all functional results: Harris Hip Score (84.0 vs 81.3; p=0.045), mobility score (7.0 vs 6.6; p=0.008), Timed Up and Go test (18.8 vs 21.0 seconds; p=0.002), and abductor strength (6.5 vs 5.6 kg; p<0.001)
- Union rates, fracture reduction, neck-shaft angle and tip-apex distance were similar in both groups at one year; however, the PFNA-II group had a significantly higher degree of lateral sliding of the helical blade (6.9 vs 1.9 mm; p<0.001)

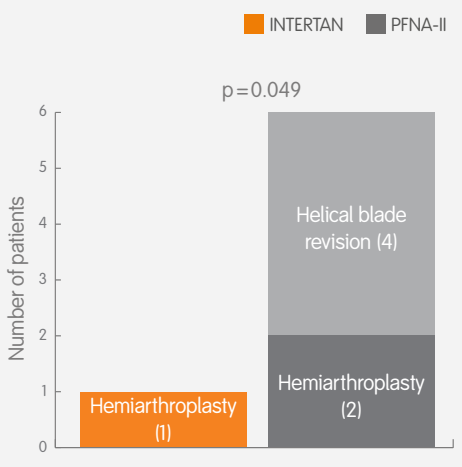

Figure. Revisions at one year, by operation type

Conclusion

The authors hypothesise that INTERTAN's innovative integrated lag screw design may produce superior functional results and fewer complications compared with a helical blade design for unstable trochanteric fractures. Adequately powered randomised controlled trials will help confirm this association.

Study citation

*Gavaskar AS, Tummala NC, Srinivasan P, Gopalan H, Karthik B, Santhosh S. Helical blade or the integrated lag screws: a matched pair analysis of 100 patients with unstable trochanteric fractures. *J Orthop Trauma*. 2018;32:274-277.

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