

INTERTAN[®] provides significantly greater fracture compression and reduced femoral shortening than a helical blade cephalomedullary nail

Twelve months after surgery for intertrochanteric fractures, patients treated with INTERTAN also had significantly lower rates of proximal screw backup and a decrease in the varus angle of the proximal femur



Study design

- A prospective, randomised, single-surgeon study of patients with intertrochanteric fractures who received either:
 - INTERTAN integrated compression screws: 32 patients (mean age, 75.3 years; 78.1% unstable fractures)
 - PFNA[™] (Depuy Synthes) helical blade: 43 patients (mean age, 75.9 years; 74.4% unstable fractures)
- Patients were followed for a mean of 19.4 months



Key results

- INTERTAN provided significantly more fracture compression than the helical blade (Figure 1)
- The lateral extension of the nail and amount of proximal femoral shortening were significantly reduced for INTERTAN (Table 1)

Table 1. Comparison of groups according to mean reductions in values from first postop day to first year

	INTERTAN	Helical blade	p value
Lateral extension (screw backup)	1.90 mm	6.05 mm	<0.01
Length of proximal femur (shortening)	-1.31 mm	-3.00 mm	<0.01
Change in neck-shaft angle (collapse)	-0.19°	-1.09°	0.184

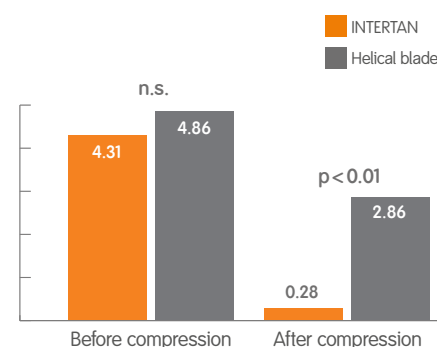


Figure 1. Fracture gap before and after compression (mm)



Conclusion

In patients healing from treatment for intertrochanteric fractures, the helical blade cephalomedullary nail led to significantly higher rates of reverse displacement of the proximal screw, shortening of the proximal femur, and decrease in the varus angle of the proximal femur compared with INTERTAN. The authors hypothesized that the stronger hold of the femoral head and increased compression that INTERTAN's integrated compression screws provides play a major role in improving outcomes.



Study citation

*Seyhan M, Turkmen I, Unay K, Ozkut AT. Do PFNA devices and Intertan nails both have the same effects in the treatment of trochanteric fractures? A prospective clinical study. *J Orthop Sci*. 2015;20:1053-1061.