

+ Evidence in focus

Publication summary: De Leon J, et al. *Patient Saf Surg.* (2020)*

Smith+Nephew

High rates of union of femoral shaft fractures with TRIGEN[◇] META-TAN[◇] Trochanteric Antegrade Nail without implant failure

+ Plus points



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Mechanical hardware failures at 3 months (n=33)



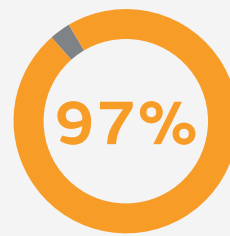
97%
of patients achieved radiographic union at 3 months (32/33)

Overview

- Retrospective chart review analysing outcomes and radiographs from 33 patients (median age, 42.5 years; range 18–89 years), with traumatic femoral shaft fractures treated with the TRIGEN META-TAN implant
- This is the first study evaluating a specific implant for the treatment of femoral shaft fractures and ipsilateral pathology
- Patients with a minimum of 3-month follow-up data were included
- Primary outcome measure was mechanical hardware failure (screw or nail breakage) and secondary outcomes included malunion, non-union and reoperation rates

Results

- No mechanical hardware failures were observed at 3 months (n=33)
- 32/33 patients achieved radiographic union at 3 months (Figure), a rate comparable to literature for other implants
 - The one patient with non-union had risk factors associated with higher non-union rates regardless of the implant used (high-energy trauma and an open, comminuted fracture)
 - Reoperation was required for the patient with non-union, however, no other reoperations were performed



of patients (32/33) treated with a TRIGEN META-TAN implant **achieved radiographic union at 3 months**

Figure. Proportion of patients achieving radiographic union at 3 months

Conclusions

In this retrospective chart review, the TRIGEN META-TAN implant demonstrated high rates of union in the treatment of femoral shaft fractures with ipsilateral pathology. The non-union rate was comparable to rates reported in literature for other implants and no mechanical hardware failures occurred.

Citation

*De Leon J, Tye C, Breinholt C, Dang K, Karia R. Safety and efficacy of a novel cephalomedullary nail femoral shaft fractures: a retrospective observational cohort in 33 patients. *Patient Saf Surg.* 2020;14(1):44.

Available at: [Patient Safety in Surgery](#)