

# Using a corkscrew-tipped telescopic nail in the treatment of osteogenesis imperfecta: a biomechanical study and preliminary results of 17 consecutive cases

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## Abstract Author Information Authors Article Metrics Metrics

High complication rates were reported with the telescopic nail technique systems. To overcome such technical difficulties, we designed a corkscrew-tipped telescopic nail (CTTN). We biomechanically compared its pullout strength with that of two other tip designs. We used CTTN in 17 patients with osteogenesis imperfecta and reported their preliminary results. Average patient age was 82.6 months, and mean follow-up was 32.0±6 months. Telescoping and osteotomy site healing were assessed using radiological studies. Successful telescoping with event-free osteotomy site healing was achieved in 94.1% of patients; limited telescoping and delayed union were detected in one case each. Our results show that CTTN provides sufficient pullout strength and reduced complication rates compared with other designs.

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