



## **Experience with the Fassier-Duval Telescopic System in the treatment of Osteogenesis Imperfecta.**

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**SUMMARY :** The current report presents our experience with the use of the Fassier-Duval telescopic system in children with Osteogenesis Imperfecta.

The lower incidence of re-operation achieved with non-expandable rods in OI patients (51%) when compared to early designs of telescopic rods (27%) has been offset by the high incidence of mechanical failure observed in the latter. With reported complication rates up to 55% with both traditional solutions, the development of a new concept was long overdue. A new telescopic IM rod with no articular effraction was developed with the objective of maintaining the advantages of telescopic devices while avoiding recurring mechanical complications. The new device has proximal and distal threaded fixation and it can be implanted anterograde with a minimally invasive postero lateral approach. Forty four cases of long bone rodding (43 femurs, 1 humerus) in 28 patients with OI and one patient with skeletal dysplasia were treated. Patients' average age at operation was 47 months (13 m to 11 years) with maximum follow-up up to 34 months. Early results show that 93.2% of the cases continue to elongate successfully. There were 3 complications encountered in the group: one patient suffered protrusion of the male component into the knee joint and needed revision; one female component implant migrated proximally into the buttock due to immediate post-op load-bearing by the child; and one rod did not telescope with no indication of growth retardation or arrest so far. It is concluded that in the short term (under 3 years post-op) the use of the Fassier-Duval telescopic system in early childhood in OI patients can reduce the complications associated with telescopic nailing.