Commentary: Intramedullary nailing supplemented with Poller screws for proximal tibial fractures

Frankie Leung
Department of Orthopaedics and Traumatology, Queen Mary Hospital, University of Hong Kong, Hong Kong

Intramedullary fixation of proximal tibial fractures is challenging owing to the relatively high chance of displacement during nail insertion. The stability of the proximal fixation is inferior because of the wider diameter of the intramedullary canal in the metaphysis. This has led to the use of Poller screws for additional blocking during intramedullary fixation of proximal or distal tibial fractures. The effects of Poller screw are two-fold. First, fracture reduction is better maintained during nail insertion, which reduces the chance of malunion. Second, the stability achieved by additional Poller screws enables quicker fracture union.

Stability can be further enhanced by modifying nail design and locking options, such as increasing the number of locking screws inserted into the metaphyseal fragment, and using angularly stable locking screws that diminish the amount of nail wobble in the screw hole.

In this issue, Kulkarni et al. report a series of 75 proximal tibial fractures successfully treated with additional Poller screws during intramedullary nailing. One drawback is that revision procedures for the 15 cases of delayed or malunion were not described. The effects of Poller screws in these 15 cases were unclear. An established malunion often necessitates a corrective osteotomy and additional bone grafting. Moreover, fracture alignment could not be compared accurately when follow-up radiographs were taken in different ways. Nevertheless, the authors successfully proved the effectiveness of this simple technique in promoting fracture union without significant malalignment. Good functional results were also obtained. This study further highlights the importance of a good fracture reduction in order to speed up bony union even when intramedullary fixation is used.

REFERENCES