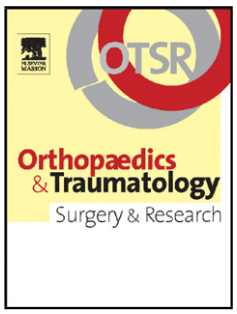

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Technical note

Navigation for Lower Limb Alignment during Internal Fixation of Complex Tibial-Plateau Fractures

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ABSTRACT

In complex fractures of the proximal tibial metaphysis and epiphysis, possible adverse outcomes after internal fixation include not only joint surface incongruity, but also lower limb malalignment requiring revision surgery. Navigation has been proven effective for the intra-operative control of lower limb alignment during osteotomy and knee arthroplasty. In complex traumatic fractures, temporary fixation by a locking screw plate allows sensor positioning followed by navigation manoeuvres to adjust lower limb alignment. If malalignment is found, the construct can be modified economically by altering the diaphyseal fixation without modifying the metaphyseal screws. The objective of this study was to describe the use of navigation in three patients who required internal fixation of tibial-plateau fractures.

Key words: Knee. Navigation. Tibial plateau fracture. Internal fixation.

INTRODUCTION

Internal fixation is challenging in tibial-plateau fractures. Complex metaphyseal and epiphyseal fractures type 41A3 or 41C in the AO classification raise the greatest difficulties [1]. Reconstruction