

Derby intramedullary nail: further biomechanical comparison

Abstract:

This paper is the second part of a study into the mechanical effectiveness of a new intramedullary femoral nail (the Derby nail). The results of three point bending tests have shown that the Derby nail is stronger and stiffer than both the K and Zickel nails and offers advantages over the AO plate, despite the latter's higher load carrying ability when used on the compressively loaded bone face. Previous work by the authors has shown the Derby nail to be superior in torsional loading and it is felt that this intramedullary device offers sound clinical advantages over the other designs, this being confirmed by extensive clinical trials.