

Four quadrant parallel peripheral screw fixation for displaced femoral neck fractures in elderly patients

Sir,

We read with great interest the recently published article¹ entitled “Four quadrant parallel peripheral screw fixation for displaced femoral neck fractures in elderly patients.” Although we applaud the work, we wish to draw the attention of the authors to certain critical points which need to be clarified.

A study² reported that the triangular placement of screw had a higher peak load, higher ultimate load, less displacement, and more energy absorption before failure than other configurations. It has been demonstrated that the use of a fourth screw does not have a significant increase in mechanical advantage in most FNF.³ We would like to know whether any biomechanical analysis was done before proposing the current configuration. Authors advocated the use of present technique in all possible cases of FNF in older population despite the fact that in basicervical FNF⁴ and in Pauwels’ Type III FNF,^{5,6} sliding hip screw with the derotational screw (biomechanical superiority) is an ideal implant for this fracture configuration. If the authors agree with this modality of treatment, how do they justify clubbing all the FNF together to compare the outcome? It has been shown in a cadaveric study⁷ that the pattern of screw insertion is critical in determining the susceptibility of the bone to stress fracture. Authors⁷ recommended not placing screws at the same level transversely as the vertical pattern is less apt to predispose a long bone to subsequent fracture than a horizontal pattern of screw insertion. In context of this cadaveric study we need justification from the current authors of placing parallel screws (transversely at two levels) in four quadrants. Furthermore we would like the authors to clarify the optimal screw positioning especially in cases of non-anatomical reduction (50% in present series).

Another thing that concerns us is the “absence of washers.” It has been demonstrated⁸ that use of washers significantly decreases the risk of fixation failure. In the present technique, authors have not used any washers.¹ We would like the authors to clarify this issue.

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