

2-year Postoperative Difference of neck shortening in femoral neck fractures between a Femoral Neck System and Multiple Cannulated Cancellous Screws - Single Centre, Prospective Randomized Controlled Trial

Saurabh Gupta¹
¹Orthopedic

INTRODUCTION: Fracture union after osteosynthesis of a Fracture neck femur (FNF) occurs by compression of the fracture ends and potential neck shortening. Selection of an implant for fixation of a femoral fracture of the neck can be challenging when making management decisions. Femoral neck shortening after internal fixation of FNFs using a FNS (Femoral Neck System) or MCS (Multiple Cannulated Cancellous Screws) was compared

METHODS: This prospective interventional single-blinded randomized controlled trial was conducted at a university teaching hospital. Sixty patients undergoing internal fixation for management of sub-capital or trans-cervical FNFs were randomized and assigned, to one of the two groups - the Test group (Group FNS) and the Control group (Group MCS). Primary outcome was determined by measuring the difference in one-year shortening of the femoral neck on radiographs between FNS and MCS. The secondary objective was to determine the correlation between neck shortening with Patient Reported Outcome Measures (PROMs) at the end of the final follow-up

RESULTS: At the final follow-up, shortening of the femoral neck was 3.77 ± 1.87 mm in the FNS group, significantly lower compared with the control group MCS, 6.53 ± 1.59 mm

DISCUSSION AND CONCLUSION: Significantly less shortening of the femoral neck was observed in the FNS group compared with the MCS group. No statistically significant difference in PROMs was observed at one-year follow-up. The findings of the study suggest that FNS can be regarded as a suitable alternative for internal fixation in young adults (<60 years)

