

## Abstract

**Background:** Antegrade intramedullary nailing is currently considered the gold standard for treatment of femur shaft fractures although retrograde technique is gaining acceptance. Although introducing the nail through the knee has potential to damage the intra articular structures, several reports have indicated acceptable functional outcome. The results are not known in our centre that so far lacks an established patient selection and knee rehabilitative protocols in spite of the widespread use of the retrograde technique. Objective: To compare the functional outcome of the knee joint after retrograde and antegrade intramedullary nailing of femoral shaft fractures.

**Methods:** A comparative cross sectional study carried out on patients who were treated with retrograde and antegrade intramedullary nailing for femoral shaft fractures between January 2007 and December 2009.

Functional outcome was determined using modified HSS score.

**Results:** A total of 124 patients participated in the study. According to the modified H.S.S knee rating system, overall, functional results were rated as excellent in 71.8%, good in 23.4% and poor in 3.2%. The retrograde group had poorer results than Antegrade group ( $p < 0.001$ ). There was a negative correlation between age and the functional outcome in the retrograde group ( $p < .001$ ). The incidence of knee pain was higher in the retrograde group (37.5%) as compared to 10% in the Antegrade group, while the rate of knee stiffness was higher in the retrograde group (40.6%) compared to the Antegrade group (3%).

**Conclusion:** Retrograde nailing is associated with poorer knee scores in our patient population. Increasing age is a factor associated with poorer scores especially after retrograde nailing.

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