

## AB127. 83. Single versus separate implant fixation for ipsilateral concomitant femoral neck and shaft fractures: a systematic review

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**Background:** Concomitant ipsilateral femoral neck and shaft fractures are uncommon, occurring in 1–9% of femoral shaft fractures. While this injury typically occurs in young patients following high-energy trauma, little consensus has been established regarding the optimal fixation approach. A multitude of treatment strategies, are in existence, with limited evidence as to which is more favourable. The aim of this study was to appraise current evidence, comparing management with either one single or separate devices for both fractures.

**Methods:** A systematic review was undertaken in accordance with preferred reporting items for systematic reviews and meta-analyses (PRISMA) guidelines. Studies

published between 1992 and 2018 comparing the rate of postoperative nonunion, malunion, delayed union, avascular necrosis, infection or reoperation between at least one method of single device fixation and one method of separate device fixation were included.

**Results:** Six non-randomised cohort studies assessing 173 patients were suitable for inclusion, each comparing single device cephalomedullary nail fixation of both fractures with a combination of devices. All patients presented following high-energy trauma, at a median age of 32 years. The rates of femoral neck nonunion and reoperation appeared higher in the single device group, with a low complication rate and favourable outcomes found across both groups.

**Conclusions:** This injury pattern continues to occur in the traditionally described patient group, and results in acceptable postoperative outcomes. Single device fixation appears to be associated with certain higher complication rates. Prospective, randomised trials with adequately powered sample sizes are required for more definite comparison of these two management strategies in this rare but complex injury.

**Keywords:** Femur; neck; shaft; fracture; concomitant; ipsilateral

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