

Smith-Petersen Versus Watson-Jones Approach Does Not Affect Quality of Open Reduction of Femoral Neck Fracture

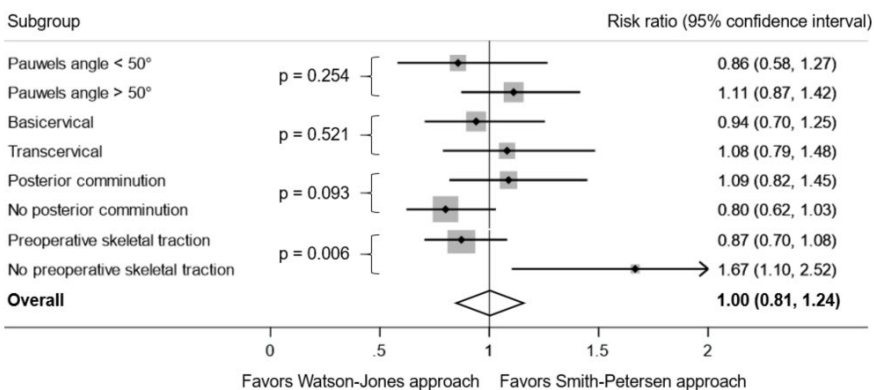
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Purpose: This study was undertaken to compare the immediate quality of open reduction of femoral neck fractures by alternative surgical approaches.

Methods: 80 adults aged 18 to 65 years with isolated, displaced OTA / AO type 31-B2 or -B3 femoral neck fractures treated with internal fixation via an open surgical reduction were retrospectively identified from the registries of 12 Level I North American trauma centers. The intervention was the use of a modified Smith-Petersen anterior approach (n = 32) versus Watson-Jones anterolateral approach (n = 48) for open reduction. The main outcome was reduction quality as assessed by 3 senior orthopaedic traumatologists as “acceptable” or “unacceptable” on AP and lateral postoperative radiographs.

Results: 19% of reductions were not acceptable to the panel. No difference was observed in the rate of acceptable reduction by modified Smith-Petersen (81%) versus Watson-Jones (81%) approach (risk difference null, 95% confidence interval [CI] -17.4% to 17.4%, P = 1.00) with 90.4% panel agreement (Fleiss’ weighted $\kappa = 0.63$, P<0.01). Stratified analyses did not identify a significant difference in the rate of acceptable reduction between approaches when stratified by Pauwels angle, basicervical or transcervical fracture location, or posterior comminution. The Smith-Petersen approach afforded a better reduction when preoperative skeletal traction was not applied (RR = 1.67 [95% CI 1.10-2.52] versus RR = 0.87 [95% CI 0.70-1.08], P = 0.006).

Conclusion: The quality of open reduction of displaced femoral neck fractures in young adults was not influenced by the choice of a Watson-Jones anterolateral approach versus a modified Smith-Petersen anterior approach when the procedure was performed by a fellowship-trained orthopaedic trauma surgeon.



See the meeting app for complete listing of authors’ disclosure information. Schedule and presenters subject to change.

POSTER ABSTRACTS