COMPARITIVE REVIEW OF OUTCOMES AFTER ANTEROMEDIALIZATION OSTEOTOMY VERSUS FEMORAL ROTATIONAL OSTEOTOMY

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Purpose: The purpose of this study is to review and compare the clinical outcomes of patients after a distal femoral osteotomy versus an anteromedialization osteotomy for patellofemoral instability, maltracking, and pain.

Methods: Using PubMed, Embase, and Scopus, a total of 13 Level I-IV articles were reviewed in which distal femoral osteotomies or anteromedializing osteotomies of the tibial tubercle were performed. Demographic data, operative indications, pain and function scores as well as complications were extracted and analyzed. Study quality was assessed using the Coleman Methodology Score.

Results: A total of 73 patients underwent a distal femoral osteotomy and 397 patients underwent an anteromedialization osteotomy. Operative indications included patellofemoral pain, malalignment, and instability. The average complication rate among studies in which patients underwent a distal femoral osteotomy was 12.3%, a 4.1% rate of nonunion, and zero cases of recurrent instability versus studies in which patients underwent an anteromedialization osteotomy with an average complication rate of 9.8%, 0.5% rate of nonunion, and 11.4% rate of recurrent instability. 91.9% of patients were satisfied after a distal femoral osteotomy versus 80.6% after an anteromedialization osteotomy.

Conclusion: While both procedures led to good patient satisfaction, in the studies reviewed, anteromedialization osteotomies had lower incidence of overall complications and nonunion but a higher rate of recurrent instability.