



Title

GENDER DIFFERENCES IN PATELLOFEMORAL JOINT BIOMECHANICS

Authors

Csintalan RP, Schulz MM, Woo J, McMahon PJ, Lee TQ

Publication

Clinical Orthopaedics and Related Research. September 2002;402:260-269

Purpose/Premise

One of the objectives of this study was to assess the impact of gender on patellofemoral joint biomechanics, as patellofemoral pain is often associated with patellar malalignment, which is more common in female patients.

Material and Methods

A custom knee jig was used to test 12 fresh-frozen knees from cadavers. The extensor mechanism was loaded with a variety of multiplane loads. Pressure-sensitive film was used to measure patellofemoral contact area and pressure at various degrees of knee flexion.

Outcomes

Patellofemoral contact area was greater in men at joint flexion angles greater than 30°. At 0° and 30°, women had significantly greater mean patellofemoral contact pressures. Female knees also showed greater changes in contact pressures to various loads at flexion angles of 0°, 30°, and 60°.

Conclusion/Recommendation

The authors concluded that there are significant gender differences in patellofemoral contact areas and pressures, and suggest that these differences may contribute to an increase in the incidence of patellofemoral disorders in women.

More information about this article may be requested from your local Zimmer representative or by logging onto science.zimmer.com.