ISAKOS

**International Society of Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine**

11th Biennial ISAKOS Congress • June 4-8, 2017 • Shanghai, China

**Paper #64**

# The Radiographic Midpoint Of The Medial Patellofemoral Complex

Miho Tanaka, MD, UNITED STATES
**Marc Tompkins, UNITED STATES**
John P. Fulkerson, MD, UNITED STATES

Johns Hopkins Hospital
Baltimore, MD, UNITED STATES

**Summary**:
The radiographic midpoint of the MPFC is 18.8+/-14.3% of the articular surface from the superior pole of the patella, which may have use as another reference during graft placement in the treatment of patellar instability.

**Abstract**:
Background: Cadaveric studies have described the attachment of the medial patellofemoral ligament (MPFL) as having fibers inserting on both the patella and the vastus intermedius tendon. A recent study referred to this structure as the medial patellofemoral complex (MPFC) to account for the variability in its anatomy, and the authors reported the anatomic midpoint to be at the junction of the medial quadriceps tendon and superior articular border of the patella. Because fluoroscopy is often utilized in graft placement during patellar stabilization surgery, the aim of this study was to describe the radiographic midpoint of the MPFC.

Methods: 17 fresh-frozen cadaveric knees were dissected, and the MPFC was exposed from the articular side after a lateral parapatellar approach and removal of the synovium. The MPFC was outlined; then using a ruler, the midpoint of the anterior attachment of the MPFC was identified and marked with a pin. Lateral fluoroscopic images of the knee were obtained and uploaded into digital analysis software. The distance from the superior articular pole was measured and divided by the length of the articular surface to describe the location of the pin in percentage of patellar articular length.

Results: Of the 17 cadaveric knees, 2 were excluded due to inability to clearly identify the MPFC fibers for analysis. In the remaining 15 knees, the proximal-distal width of the attachment to the patella and/or vastus intermedius tendon was 41.6 +/- 9.0mm. When viewed radiographically, the midpoint was found to be 18.8+/-14.3% of patellar articular length from the superior articular pole.

Conclusion: This study describes the radiographic midpoint of the MPFC to be 18.8+/-14.3% of the articular surface from the superior pole of the patella. While previous anatomic studies of the MPFC have described this midpoint using anatomic landmarks at the junction of the medial border of the quadriceps tendon and superior pole of the patella, we describe this radiographic landmark for potential use as another reference during graft placement in the treatment of patellar instability.