**Original article**

**A study of femoral condylar morphometry**

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**Abstract:**

**Introduction:** Relative incongruent nature of the knee joint surfaces with repetitive high compressive forces augments degenerative bone disease. Joint replacement, the upcoming treatment of choice in degenerative bone diseases, would involve accurate placement of well-fitted distal femur implants and adequate balancing of the surrounding soft tissues. The use of an appropriate femoral component size is essential to maintain the normal functional range of motion of the knee without impingement, hence the study is designed.

**Methods:** Bicondylar depth, bicondylar width, intercondylar notch depth and intercondylar notch width were measured by a single author using suitable calipers and following standardized methods in all 127 study sample of adult dry femora .

**Observations & Results:** Mean bicondylar depth 5.270±0.469cm and mean bicondylar width 7.421±0.603cm were obtained in the study of 127 femora. With P 0.348 and 0.751 for both parameters respectively, no significant left-right asymmetry could be demonstrated in the study. Mean intercondylar notch depth 2.731±0.330cm and mean intercondylar notch width 1.882±0.272cm were revealed with all the study samples. Sided dimorphism could not be shown with P 0.565 and 0.380 respectively for intercondylar notch depth and intercondylar notch width. Intercondylar notch width index obtained in the study as 0.254±0.030 with intercondylar notch dept index 0.518±0.043 none having any significant left vs. right variation.

**Conclusion:** Outcome of the present study viz. bicondylar width, bicondylar depth, intercondylar notch width, intercondylar notch depth along with notch width index and notch depth index will play crucial role in the field of prosthesis designing for Indians.

**Key words:** Femur, Bicondylar depth, Bicondylar width, Intercondylar notch, Notch Depth Index, Notch Width Index