

Original Research Article

A Study on the Morphometric Measurement and Intrinsic Innervation of the Knee Meniscus in Adult Burmese Population

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ABSTRACT

Introduction: Understanding the dimensions of the knee joint menisci is crucial for arthroscopic surgery and the management of injuries. Menisci's size, shape, and composition play roles in determining the structural and material properties of the tissue allograft. The present study aims to describe the morphometric measurement and intrinsic innervation of the knee meniscus in Myanmar's adult population.

Methods: The length, width, thickness, and other morphometric factors of 160 menisci from twenty male and twenty female autopsy bodies were measured. Five menisci from fresh cadavers were dissected, stained with Marsland, Glees, and Erikson's staining methods, and examined under a light microscope.

Results: The average length of the medial and lateral meniscus was 8.49 cm and 7.98 cm, respectively. The average width of the anterior horn, body, and posterior horn of medial menisci were 0.64 cm, 0.63 cm, and 1.25 cm, and that of lateral menisci were 0.94 cm, 0.89 cm, and 0.95 cm. The average thickness of the anterior horn, body, and posterior horn of medial menisci was 0.38 cm, 0.45 cm, and 0.47 cm, and that of lateral menisci were 0.25 cm, 0.42 cm, and 0.39 cm. Ruffini's corpuscles, Paccinian corpuscles, and Golgi tendon organs with fibrous capsules were observed under the light microscope at the anterior and posterior horns of the menisci.

Conclusions: The present study provides a good understanding of the knee meniscus in the Myanmar adult population, which will help morphologists and orthopaedic surgeons design prostheses and perform knee joint arthroscopy with a high success rate.

KEYWORDS: Measurements, innervation, human, knee meniscus

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