SPECIMENS FROM THE HUNTERIAN COLLECTION

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6. The Knee Joint (Specimens S 108 A and S 108 B)*

The specimens figured here are complementary to those shown in the previous number of this Journal. They illustrate further points concerning the ligaments and menisci of the knee joint and the attachments of the popliteus muscle.

Specimen S 108 A

Specimen S 108 A. Posterior view—The anatomy of the popliteus muscle is well seen. Its fleshy belly arises from the popliteal surface of the tibia above the soleal line. The lateral half of the muscle passes beneath the arcuate ligament (which is seen arching from the head of the fibula to the lateral meniscus) and there forms a tendon which passes to the interior of the knee joint and so to the femoral condyle. The medial half of the popliteus is not inserted into the femur but forms a flat tendon which is inserted into the posterior convexity of the lateral meniscus. The meniscal insertion of popliteus is here isolated by removal of the underlying capsule and synovial membrane of the knee joint.

The medial condyle of the femur has been removed to expose the cruciate ligaments;

* Previous descriptions in this series appeared in the current volume of this Journal, on pages 115 (February 1951), 264 (May 1951) and 442 (August 1951).
the ligament of Wrisberg is seen passing from the lateral meniscus behind the posterior cruciate ligament. Part of the medial ligament of the knee joint has been removed to expose the forward prolongation of the insertion of semimembranosus tendon. The freedom of the medial ligament from the condyle of the tibia and from the medial meniscus is well shown. The medial ligament is separated by a bursa from the medial meniscus. That part of the capsule of the knee joint between the lateral epicondyle of the femur and the medial meniscus is thickened; it is the "short internal lateral ligament" of old terminology, unnamed in current British terminology. It extends only between femur and meniscus, not between meniscus and tibia. It is retained in the specimen and can be seen projecting above the meniscus. This medial part of the meniscus, midway between its two extremities, is thus forced to move with the femur during rotation of the knee, while the attached horns of the meniscus naturally move with the tibia, and so considerable torsion of the meniscus occurs during rotation.

The freedom of the lateral meniscus from the lateral ligament is obvious in this specimen. The posterior convexity of the lateral meniscus is doubly attached—by the ligaments of Wrisberg and Humphry to the femur, and by a flat tendon to the popliteus muscle. It is free to move, and its position during rotation of the knee is controlled by its attachments to femur and popliteus, which fact renders it relatively immune to injury. Lateral view—The "short external lateral ligament" (O.T.) has no name in current terminology. It is sometimes absent. It is well developed in this specimen, and is fully exposed by removal of the lateral ligament of the knee (the "long external lateral ligament" of old terminology). Note that superiorly it is one with the tendon of popliteus, but that
below it separates from the tendon and is inserted into the head of the fibula. It is as thick and strong as the lateral ligament itself. The remaining structures shown in the lateral view can be identified by reference to the drawing.

**Specimen S 108 B**—The insertion of half the popliteus muscle into the lateral meniscus is again illustrated in this specimen. The flat meniscal tendon of the muscle has been isolated by removal of the capsule of the knee joint, and a glass rod has been inserted beneath it.

The medial ligament is triangular. Its anterior vertical part is free from the medial meniscus; but posteriorly its upper and lower fibres converge to be inserted into the posterior convexity of the meniscus. The lower fibres are long, and the condyle of the tibia can rotate beneath them without moving the meniscus. The upper fibres are short, and with the short internal lateral ligament (O.T.) mentioned above under No. 6 cause the convexity of the meniscus to move with the femur during rotation of the knee.

The strong fascia over popliteus is derived from the tendon of semimembranosus. Note that the fleshy fibres of soleus arise from this fascia, only the thick aponeurosis on the deep surface of the muscle arising from the soleal line.

In this specimen the lateral ligament of the knee can be seen extending upwards from the fibula; here there was no short external lateral ligament.

The drawings of the specimens (inset) are by Dr D. Tompsett.