Perth Knee Clinic

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The Anterolateral Ligament of the Knee and its role in Anterior Cruciate Ligament injury.

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The anterolateral ligament (ALL) is a ligament of the knee that has been recently defined anatomically and this research has led to changes in the way we look at the stability of the knee joint, and how best to manage anterior cruciate ligament (ACL) injuries.

It was originally described in 1879 by Dr. Paul Segond who noted a “pearly, resistant fibrous band” originating at the lateral epicondyle of the femur and attaching to the tibia.

However, accurate description of its anatomy, and more importantly its role in providing rotational stability to the knee, has only very recently been defined in award winning research by Dr Steven Claes who comments “Despite glimpses of the ligament in medical history, this is the first time its structure and purpose have been so clearly established” (1)

Further research has determined that the ALL is in fact a primary stabiliser of internal rotation of the knee. A role up until now thought to be due solely to the ACL. (2,3)

This could explain why ACL reconstruction alone does not provide adequate stability in all patients.

We are now using surgical techniques that have been developed to perform combined ACL plus anatomical ALL reconstruction. With this technique, no additional graft material is required over traditional anatomical ACL reconstruction, due to different graft fixation devices which allow a shorter, thicker ACL graft, leaving more than enough graft to perform anatomical ALL reconstruction.

1. Anatomy of anterolateral ligament of knee. *Claes et al. J. Anatomy (2013) 223, p321-328*
2. The biomechanical function of the anterolateral ligament of the knee. *Parsons et al. Am J Sports Med (2015) 43(3), p 669-674*
3. The anterolateral ligament. Anatomy, length changes and association with the Segond fracture. *Dodds et al. Bone Joint J* 2014;96-B:325–31