

CORRESPONDENCE

REGIONAL ANESTHESIA

An aberrant lateral femoral cutaneous nerve: superficial to sartorius is the norm but not the rule

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The lateral femoral cutaneous nerve (LFCN) is relevant for anesthesiologists from multiple aspects. Knowledge of anatomical variation, which is rarely reported, is therefore equally essential. This report illustrates one such variant and the importance of a clear understanding of relevant Sonoanatomy to precisely locate the nerve. Figure 1 shows the normal site of LFCN.

A 37-year-old female ASA physical status 1, body mass index 28 kg/m², presented to us to split skin graft of right upper limb extending from the distal arm to wrist. Spinal anesthesia and right brachial plexus block were used, and the intraoperative course was uneventful. The femoral nerve and LFCN blocks were planned for the right lower limb (graft donor area) for postoperative analgesia. On ultrasound scan with a linear probe of Edge 2™ ultrasound system (Sonosite Inc.) along the anterior superior iliac spine, LFCN could not be appreciated at its usual position, i.e., ventral to the sartorius muscle. So, the femoral triangle was scanned to locate the femoral nerve. While doing so, we detected an ovoid hypoechoic structure with a hyperechoic dot within the muscle mass of sartorius with a pulsation along with it (Figure 2). Ropivacaine 0.25% 5 ml was injected around the hyperechoic structure, considering it as LFCN. Then, the femoral nerve block was performed with 10 ml of 0.25%

ropivacaine. The patient was pain-free for up to 7 h postoperatively, when she asked for rescue analgesia.

The LFCN is a purely sensory nerve originating from the posterior division of the ventral rami of the L2-L3 spinal nerve. It makes an appearance from the lateral border of the psoas major muscle and courses obliquely across the iliacus muscle toward the anterior superior iliac spine (ASIS). It has been widely variable cutaneous distribution over lateral, anterior, and medial thigh as far as distal to the knee.¹ It is typically located 1.5 to 2.0 cm medial to the ASIS, although it may travel as far as 6 cm medial or even lateral to the ASIS.² The LFCN usually enters the thigh as a single branch passing deep (dorsal) to the inguinal ligament in 70%–90% of cases. Less commonly, it may pass superficial (ventral) or directly through the inguinal ligament, and sometimes even through a bony canaliculus of the ASIS. As the LFCN penetrates the thigh, it is almost always located superficial to the sartorius muscle and dorsal to the fascia iliaca.³

However, reports of passing through the sartorius muscle, and rarely even ventral to the fascia lata exist.⁴ Block of LFCN is performed to anesthetize the skin of the lateral thigh and management of meralgia paresthetica. There exist two techniques for the US-

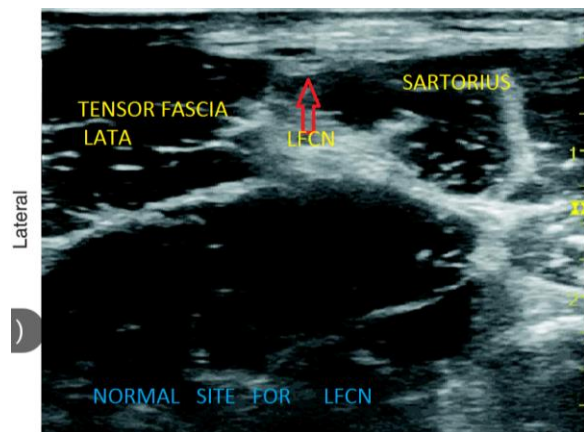


Figure 1: Normal site of LFCN

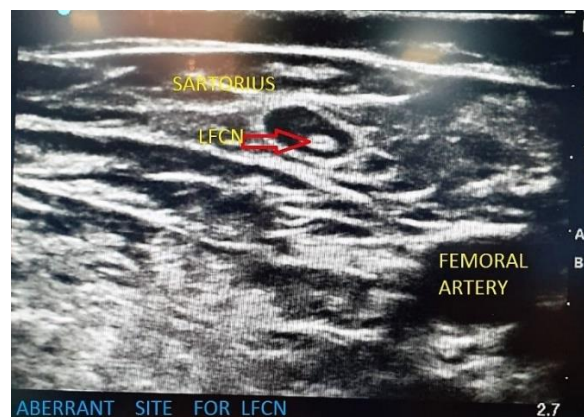


Figure 2: Aberrant site of LFCN

guided LFCN block. Subinguinal technique, an ultrasound image showing the inguinal ligament, anterior superior iliac spine (ASIS), and anterior inferior iliac spine is obtained, and the target for injection is immediately under the inguinal ligament close to ASIS. The other one is the nerve targeting

technique; the ultrasound scan is started at ASIS. The transducer is swept medially and inferiorly to locate LFCN and local anesthetic injected around the nerve. The main advantage of using US guidance for peripheral nerve blocks is detecting anatomical variations and appropriately target the nerve. However, nerve identification via ultrasound is not always possible. Ng I and colleagues found the accuracy of identifying the LFCN as 80%.⁵ Inability to identify LFCN by sonoanatomy is common. However, we believe that knowing the different abnormal routes will help us in identifying the nerve. Thinking beyond the norm and the importance of ultrasonography is stressed.

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