Letters to the Editor

Ultrasound in Anatomical Variation of Lateral Femoral Cutaneous Nerve

To the Editor:

We read with great interest the recently published brief commentary by Onat and colleagues entitled "Ultrasound-Guided Diagnosis and Treatment of Meralgia Paresthetica"(1). In this paper, the authors presented an ultrasound (US) assessment of the lateral femoral cutaneous nerve (LFCN), whose entrapment is known as meralgia paresthetica (MP). They correctly determined that diagnosis of MP is substantially clinical and based on specific referred symptoms. Moreover, as the authors wrote, a nerve conduction study of LFCN is not routinely conducted. This point is very crucial, because the diagnosis of peripheral nerve diseases is often supported by an electrodiagnostic examination. Indeed, a nerve conduction study of LFCN is not easily performed because of structural features and the location of the nerve. Furthermore, important anatomical variations of the LFCN can occur in some cases (2). From a neurophysiological point of view, these characteristics make the nerve nearly inaccessible. US has shown its usefulness in peripheral nerve disease assessment for diagnosis, prognosis, treatment, and rehabilitation decisions (3,4). For this reason, US evaluation of this nerve may be considered mandatory and can represent the real completion of the clinical examination. US provides morphological information and can allow understanding nerve anatomy and abnormalities in real time. As the authors clearly showed, this approach can be helpful to define a diagnosis and decide on management. US is decisive for intervention guiding, because this technique, as Onat and colleagues described, can avoid the possible mistakes that occur during blind injection, simply based on anatomic markers (1). In fact, failures can happen in 60% of cases. This eventuality may be linked to nerve anatomic variability. The authors described the imaging technique of LFCN evaluation, positioning the probe at the level of the inguinal ligament and moving it finely. The nerve is visible and can be localized passing over, under, or through the ligament, usually close to the anterior superior iliac spine (ASIS). This US approach is absolutely correct, but on the basis of our experience, we would like to suggest a complementary method, based on the anatomic relationship between the LCFN and the sartorius muscle (SM). This muscle originates from the ASIS and runs towards the medial portion of the thigh. The probe can be positioned distal to the ASIS; in this way the LCFN is visible, superficially just over the SM, and can be proximally followed along its course (5). This anatomical relationship seems to be very com-

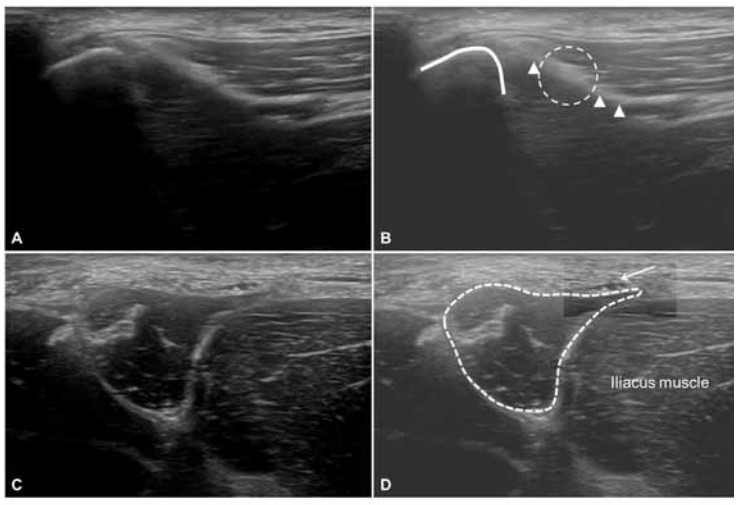

Fig. 1. *Ultrasound assessment of the LFCN. A: Original image at the level of the ASIS. B: Indication of the body structures: the continuous line represents the ASIS, the triangles designate the inguinal ligament. The nerve is not clearly visible in its usual localization (dotted line). C: Original image at the level of the SM. D: Indication of the body structures: the dotted line designates the SM, the arrow indicates the LFCN.*

mon and, for this reason, the described approach may be very useful to find the nerve, even in cases of hard US visualization at the inguinal ligament level.

We present a patient showing an unclear localization of LCFN, with an ambiguous US anatomy of the inguinal ligament and an uncertain relationship between the nerve and the ASIS (Fig. 1A). In this case, US visualization of the LCFN at the level of the SM allowed us to be sure about the nerve's course (Fig. 1C-D). The possibility to follow the LCFN to the level of the ASIS permitted us to draw the nerve site, which could be only suspected by probe positioning directly over the inguinal ligament (Fig. 1B).

We completely agree with Onat and colleagues about the usefulness of US. This is able to reveal LCFN anatomy and, hence, it should be considered essential in clinical practice for diagnosis and management of MP.

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