



ORIGINAL ARTICLE

Ultrasound guided lateral femoral cutaneous nerve block in meralgia paresthesia; review of 25 cases



Sameh Khodair ^{*}, Rasha Elshafey ¹

Radiology Department, Faculty of Medicine, Tanta University, Egypt

Received 5 February 2014; accepted 4 June 2014

Available online 5 July 2014

KEYWORDS

Neuritis;
Neuralgia;
Ultrasonography;
Diagnostic and therapeutic
anesthetic procedures
(e.g., Nerve block)

Abstract *Aim:* To evaluate the feasibility and efficacy of ultrasound guidance technique for the treatment of meralgia paresthetica (lateral femoral cutaneous neuropathy).

Methods: 25 patients (10 males and 15 females); age 17–68 years; with meralgia paresthetica are diagnosed clinically by electromyography. A needle was inserted targeting the LFCN with ultrasound guidance, treatment with perineural injection of 2 mL of methylprednisolone acetate (40 mg/mL) and 8 mL of mepivacaine, 2%, under ultrasound guidance was performed.

Main outcome measurements included the technical success of the procedure, regarding relief of symptoms (pain, burning sensation, and paresthesia) and change in the quality of life.

Results: Successful nerve block of the LFC nerve was achieved in 24 patients while 1 patient remained with mild VAS after third injection which disappeared two months later. Three patients underwent one injection, 6 two injections and 16 three injections with intervening period of 2 weeks between the first and second injections and one month between the second and third.

Conclusions: Ultrasound-guided perineural injection of the LFC nerve is quick, simple, economical, and effective in treatment of meralgia paresthetica.

© 2014 The Egyptian Society of Radiology and Nuclear Medicine. Production and hosting by Elsevier B.V. Open access under [CC BY-NC-ND license](#).

1. Introduction

The lateral femoral cutaneous nerve (LFCN) is a pure sensory nerve that originates from 2, 3 lumbar nerves and emerges

from the side of the psoas major and passes the iliacus diagonally toward the ASIS. It then passes above, below or between the inguinal ligament, above the Sartorius and into the subcutaneous tissue of the femoral region. Then it is divided into anterior and posterior division: the front controls the frontal femoral region up to the knee area, the rear controls the lateral femoral region up to the greater trochanter area (1).

Meralgia paresthetica is characterized by pain or paresthesia along the lateral femoral cutaneous nerve (LFCN) and is caused when this nerve is entrapped by fibrosis or various other reasons (2).

^{*} Corresponding author. Tel.: +20 01118030044; fax: +20 482573465.
E-mail addresses: samehkhodair@gmail.com (S. Khodair), drrashaelshafey@yahoo.co.uk (R. Elshafey).

¹ Tel.: +20 01208880028.

Peer review under responsibility of Egyptian Society of Radiology and Nuclear Medicine.

Common causes of this compression include any condition that increases pressure on the groin, including: tight clothing, obesity, pregnancy, scar tissue near the inguinal ligament, due to injury or post-surgery, walking, cycling or standing for long periods of time and nerve injury, which can be due to, for example; diabetes or a seat belt injury after a motor vehicle accident (3).

Ultrasound nowadays is being developed into a powerful tool that can observe very small peripheral nerves. Ultrasound can confirm the target nerve and surrounding structures so diagnosis is more accurate, additional damage is reduced during administration of medication and injection of steroids and local anesthetic agent can be done at the exact location. Compared to blind blocks, the amount of local anesthetic agent can be reduced, lessening systemic toxicity from the local anesthetic agent (4,5) (Figs. 1 and 2).

It has recently been suggested that ultrasound guidance can facilitate blockage of the nerve for diagnostic and therapeutic purposes and may be particularly beneficial in patients with challenging surface anatomic landmarks and when low volume injections are desired (6).

Blockage of the lateral femoral cutaneous nerve (LFCN) is performed for therapeutic management of meralgia paresthetica and as a regional anesthetic technique. The conventional technique is associated with high failure rates secondary to variable LFCN anatomy (7).

By using a 7–14 MHz linear array ultrasound probe a cross-sectional view of the LFCN was obtained by identifying the anterior superior iliac spine, then the probe is moved in a medial and caudal direction until the nerve was encountered. The needle was advanced to the LFCN under ultrasound guidance via a lateral to medial approach. Injection using dynamic ultrasound demonstrated excellent perineural spread (7,8) (Figs. 3 and 4).

A visual analog scale (VAS) is a measurement instrument that tries to measure a characteristic or attitude that is believed to range across a continuum of values and cannot easily be directly measured. For example, the amount of pain that a patient feels ranges across a continuum from none to an extreme amount of pain. From the patient's perspective this spectrum is categorized as; none, mild, moderate and severe degrees (9–11).



Fig. 1 Transverse scan at the ASIS shows the ASIS is an echogenic bridge-like structure producing intense posterior acoustic shadowing.

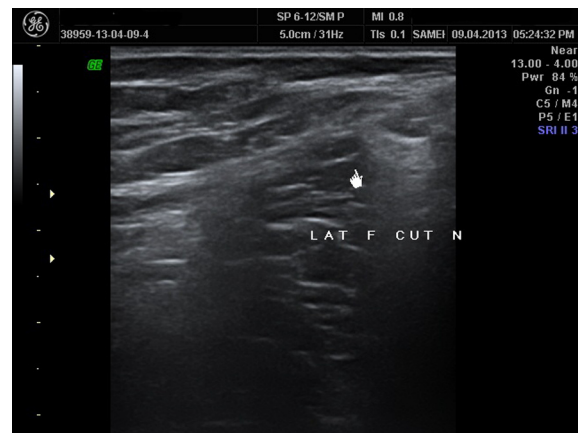


Fig. 2 The lateral femoral cutaneous nerve appears as an oval shaped structure (hand arrow).

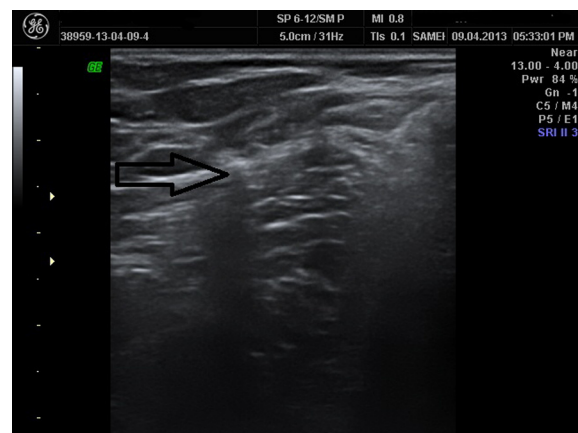


Fig. 3 The tip of the needle piercing the fascia lata just lateral to the LFC nerve (arrow).

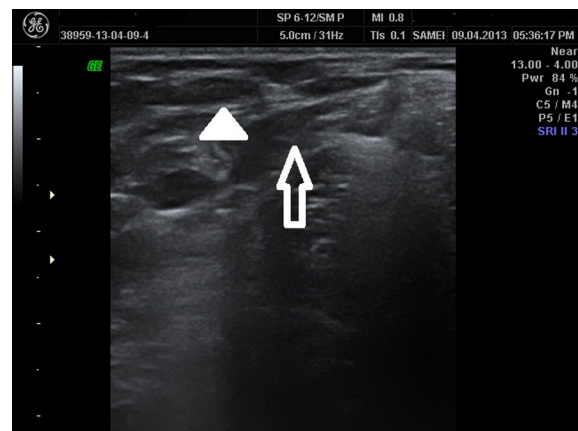


Fig. 4 The anechoic fluid injected material (arrow head) is seen surrounding the LFC nerve (arrow).

It was to capture this idea of an underlying continuum that the VAS was devised. Operationally a VAS is usually a horizontal line, 100 mm in length, anchored by word descriptors at each end. The patients mark on the line the point that they feel represents their perception of their current state of pain (9).

Download English Version:

<https://daneshyari.com/en/article/4224303>

Download Persian Version:

<https://daneshyari.com/article/4224303>

[Daneshyari.com](https://daneshyari.com)