

## Transforaminal Epidural Steroid Application in Treatment of Meralgia Paresthetica: A Case Report

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### Abstract

Meralgia paresthetica is a mononeuropathy which occurs as result of lateral femoral cutaneous nerve being under pressure at groin level; with numbness, pains and needles, and pain at external collateral and anterior thigh and inguinal region. Its treatment is conservative and surgical. In our study, we intended to present our clinical evaluation as result of transforaminal epidural steroid application in meralgia paresthetica case.

**Keywords:** Meralgia paresthetica; Lateral femoral cutaneous nerve; Transforaminal epidural steroid

### Introduction

Meralgia paresthetica (MP) is the painful mononeuropathy of lateral cutaneous femoral nerve (LCFN) which comes from L 2-3 nerve root. LCFN progresses on muscles (m) psoas-m.iliacus in iliac fossa. It passes through spina iliaca anterior superior (SIAS) and then enters into the thigh underneath Inguinal ligament. It becomes superficial on muscles sartorius and branches on fascia lata and receives the anterolateral in sense of thigh, it has no motor function [1,2].

In LCFN neuropathy, hypoesthesia and pain are more observed in general as well as numbness and pins and needles. Although the exact reason for neuropathy is unknown, most common reasons are positional mechanical pressure, anterior hip surgery, disc hernia, corset placed on thigh or using tight belt and thigh traumas [3-5].

In MP treatment, conservative and surgical applications are included. Among conservative treatment methods, reducing risk factors and pharmacotherapy are available. Of interventional methods, surgical intervention applications such as epidural steroid application, spinal cord stimulation placement and neurolysis are carried out. Epidural steroid application is an effective method in treatment as well [6].

### Case Report

#### Case

Female patient of age 56, height 1.55 cm and weight 74 kg (Body mass index: 30). She had numbness and pain at her anterior right thigh approximately for 1.5 year with the present complaints and in her magnetic resonance imaging (MRI), no bulging was found in L 2-3 disc and the patient was diagnosed MP, then non-steroid anti-inflammatory (NSAI), muscle relaxant and vitamin B therapy was initiated. Despite the current therapy, the patient whose complaints were not reduced was applied gabapentin 600 mg 3\*1 in addition and her pain was reduced 40%, and after the polyclinic pointed out, it was planned to apply Transforaminal epidural steroid (TFES). After the patient is monitored and applied sedation in operating room, scopy-

guided 2.5 mg Marcaine and 8 mg Dexamethasone were applied to right L2-3 level in sterile conditions with the existing treatment application, 100% success was achieved in pain complaints of the patient after 1 month and gabapentin application was reduced to 300 mg 3\*1.

### Discussion

MP is a rare disease with prevalence of 4, 3 in 10000 annually [7]. MP is the painful mononeuropathy of lateral femoral cutaneous nerve (LCFN). Particularly, in thigh anterolateral where lateral femoral cutaneous nerve demonstrates sensorial distribution, pain and hypoesthesia are present.

This syndrome often develops by chronic irritation of the nerve with mechanical ways such as obesity and tight belt application, and is idiopathic. The most accused reason is the tightness under inguinal ligament [2,5,8]. Lumbar disc hernia, safety belt injury due to traffic accident and diabetes are also accused for MP development [9,10].

It is quite hard to diagnose MP clinically. Diagnosis is often made by symptom and anamnesis arising from LCFN distribution area, after excluding no neurological disorder in lower extremities is available. Electromyography and nerve studies are not completely enough in diagnosis. Temporary relaxation, which is provided by local anesthetic applied around of LCFN, helps us in diagnosis [11]. MP existence can be a sign of underlying serious diseases such as lumbar disc hernia [12], pelvic mass [13], chronic appendix [14] and hemangiomatosis [15]. Other potential reasons can be listed as complex regional pain syndrome (reflex sympathetic dystrophy) or peripheral neuropathy (diabetes, vitamin B deficiency, alcoholism, and hypothyroidism). In our case, MP diagnosis arising from lumbar disc hernia was established.

MP can give good responses to conservative treatment; reducing risk factors, weight loss and to avoid tight dressing. In existence of neuropathic pain, gabapentin and carbamazepine help to reduce pain and numbness. In the study William conducted on 277 patients with conservative treatment, relaxation rate was 91% [16]. Particularly, bupivacaine and blockage [17] as well as using lidocaine tape for 6 weeks in average are effective [18]. Dexamethasone application to epidural L2-3 is particularly effective in spinal origin MP treatment

[19]. In this case, success rate in treatment was very effective with transforaminal administrated steroid and marcaine instead of epidural application.

Nerve decompression is made at levels of iliac fascia, inguinal ligament and thigh fascia at distal. Siu et al. have stated good result at a rate of 93% with this method [20]. Another surgical operation that can be made is the neurectomy of a part of lateral femoral cutaneous nerve. This method, it was stated that much less recurrence was observed compared to neurolysis [21]. As a result, MP treatment is provided both in conservative and surgical ways. Epidural steroid application is effective in the treatment. An active analgesia is provided in steroid treatment which is applied transforaminal. In epidural steroid applications, transforaminal application can be considered with treatment purposes.

## References

1. Dias Filho LC, Valença MM, Guimarães Filho FA, Medeiros RC, Silva RA, et al. (2003) Lateral femoral cutaneous neuralgia: an anatomical insight. *Clin Anat* 16: 309-316.
2. Mirovsky Y, Neuwirth M (2000) Injuries to the lateral femoral cutaneous nerve during spine surgery. *Spine (Phila Pa 1976)* 25: 1266-1269.
3. Yang SH, Wu CC, Chen PQ (2005) Postoperative meralgia paresthetica after posterior spine surgery: incidence, risk factors, and clinical outcomes. *Spine (Phila Pa 1976)* 30: E547-550.
4. Yamamoto T, Nagira K, Kurosaka M (2001) Meralgia paresthetica occurring 40 years after iliac bone graft harvesting: case report. *Neurosurgery* 49: 1455-1457.
5. Korkmaz N, Ozçakar L (2004) Meralgia paresthetica in a policeman: the belt or the gun. *Plast Reconstr Surg* 114: 1012-1013.
6. Jiang GX, Xu WD, Wang AH (1988) Spinal stenosis with meralgia paraesthetica. *J Bone Joint Surg Br* 70: 272-273.
7. van Slobbe AM, Bohnen AM, Bernsen RM, Koes BW, Bierma-Zeinstra SM (2004) Incidence rates and determinants in meralgia paresthetica in general practice. *J Neurol* 251: 294-297.
8. Gupta A, Muzumdar D, Ramani PS (2004) Meralgia paraesthetica following lumbar spine surgery: a study in 110 consecutive surgically treated cases. *Neurol India* 52: 64-66.
9. Grossman MG, Ducey SA, Nadler SS, Levy AS (2001) Meralgia paresthetica: diagnosis and treatment. *J Am Acad Orthop Surg* 9: 336-344.
10. Nahabedian MY, Dellon AL (1995) Meralgia paresthetica: etiology, diagnosis, and outcome of surgical decompression. *Ann Plast Surg* 35: 590-594.
11. Ivins GK1 (2000) Meralgia paresthetica, the elusive diagnosis: clinical experience with 14 adult patients. *Ann Surg* 232: 281-286.
12. Trummer M, Flaschka G, Unger F, Eustacchio S (2000) Lumbar disc herniation mimicking meralgia paresthetica: case report. *Surg Neurol* 54: 80-81.
13. Suber DA, Massey EW (1979) Pelvic mass presenting as meralgia paresthetica. *Obstet Gynecol* 53: 257-258.
14. Ghavanini MR, Ghavanini AA (2001) Meralgia paresthetica as the presenting feature of chronic appendicitis. *Am J Phys Med Rehabil* 80: 703-705.
15. Yamamoto T, Kurosaka M, Marui T, Mizuno K (2001) Hemangiomas presenting as meralgia paresthetica. *J Pediatr Surg* 36: 518-520.
16. Williams PH, Trzil KP (1991) Management of meralgia paresthetica. *J Neurosurg* 74: 76-80.
17. Erbay H1 (2002) Meralgia paresthetica in differential diagnosis of low-back pain. *Clin J Pain* 18: 132-135.
18. Grossman MG, Ducey SA, Nadler SS, Levy AS (2001) Meralgia paresthetica: diagnosis and treatment. *J Am Acad Orthop Surg* 9: 336-344.
19. Devers A, Galer BS (2000) Topical lidocaine patch relieves a variety of neuropathic pain conditions: an open-label study. *Clin J Pain* 16: 205-208.
20. Siu TL, Chandran KN (2005) Neurolysis for meralgia paresthetica: an operative series of 45 cases. *Surg Neurol* 63: 19-23.
21. Holanda MM, Meira UM, Magalhães FN, da Silva JA (2003) [Surgical treatment of meralgia paresthetica: case report]. *Arq Neuropsiquiatr* 61: 288-290.