Review Article

Meralgia Paresthetica: Relevance, Diagnosis, and Treatment

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Summary

Background: Pain and sensory disturbance in the distribution of the lateral femoral cutaneous nerve in the ventrolateral portion of the thigh is called meralgia paresthetica (MP). The incidence of MP has risen along with the increasing prevalence of obesity and diabetes mellitus and was recently estimated at 32 new cases per 100 000 persons per year. In this review, we provide an overview of current standards and developments in the diagnosis and treatment of MP.

Methods: This review is based on publications retrieved by a selective literature search, with special attention to meta-analyses, systematic reviews, randomized and controlled trials (RCTs), and prospective observational studies.

Results: The diagnosis is mainly based on typical symptoms combined with a positive response to an infiltration procedure. In atypical cases, electrophysiological testing, neurosonography, and magnetic resonance imaging can be helpful in establishing the diagnosis. The literature search did not reveal any studies of high quality. Four prospective observational studies with small case numbers and partly inconsistent results are available. In a meta-analysis of 149 cases, pain relief was described after infiltration in 85% of cases and after surgery in 80%, with 1–38 months of follow-up. In another meta-analysis of 670 cases, there was pain relief after infiltration in 22% of cases, after surgical decompression in 63%, and after neurectomy in 85%. Hardly any data are available on more recent treatment options, such as radiofrequency therapy, spinal cord stimulation, or peripheral nerve stimulation.

Conclusion: The state of the evidence is limited in both quantity and quality, corresponding to evidence level 2a for surgical and non-surgical methods. Advances in imaging and neurophysiological testing have made the diagnosis easier to establish. When intervention is needed, good success rates have been achieved with surgery (decompression, neurectomy), and variable success rates with infiltration.

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Compression or injury of the lateral femoral cutaneous nerve (LFCN) leads to pain and sensory disturbance in the ventrolateral part of the thigh. This syndrome is called meralgia paresthetica (MP; synonyms: inguinal tunnel syndrome, Bernhardt–Roth syndrome) (1, 2). One famous sufferer was Sigmund Freud, who described his symptoms in the journal *Neurologisches Zentralblatt* in 1895 (3). While Freud himself called MP a “harmless, although not uninteresting condition,” patients of his with MP complained of unbearable “pain using a vile superlative” (4).

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An American study published in 2011 reported the incidence of MP as 32.6 per 100 000 person years and found associations with advanced age, body mass index (BMI), and diabetes mellitus (5). An increase in incidence was first observed between 1990 and 1999. Due to the aging of society and the growing occurrence of metabolic syndrome, continued growth in the incidence of MP is anticipated. The disease can arise at any stage of life, but the incidence is highest between the ages of 40 and 60 years (6). In a case series, 13.6% of the 140 patients also had other nerve compression syndromes (7, 8). Further risk factors are obesity and the wearing of garments that are too tight at the waist (“jeans disease”). A case–control study demonstrated a significant connection between overweight and MP, with doubling of the risk for persons with BMI > 30 kg/m² (9). However, symptoms may also be caused by pronounced weight reduction with loss of the protective layer of fat (10, 11). In

TABLE 1

Overview of evidence on the treatment of meralgia paresthetica

Study	Design/ strength of evidence	Intervention		Main results	
Kiliç 2020 (e6)	RCT 2b	Infiltration*[1] TENS Sham TENS	(n = 17) (n = 16) (n = 21)	In SWMT and painDETECT, group difference in favor of infiltration, $p < 0.05$ No group difference with regard to VAS, SF-36, and PSQI	
Kloosterziel 2020 (e7)	RCT 2b	Infiltration*[2] Placebo	(n = 10) (n = 10)	Placebo: VAS from 6.8 to 4.3; $p < 0.05$ Infiltration: VAS from 7.4 to 4.8; $p > 0.05$ (no difference on group comparison)	
de Ruiter 2015 (e18)	OS 4	Decompression Neurectomy	(n = 8) (n = 14)	1 or 2 on the Likert scale (1–7) = complete or near-complete symptom reduction: 37.5% (neurolysis) vs. 93.3% (neurectomy), $p < 0.05$	
Kalichman 2010 (e32)	OS 4	Kinesio taping	(n = 10)	VAS: from 58.6 to 32.0; $p < 0.05$; VAS QOL: from 69.4 to 35.3; $p < 0.05$ Symptomatic area, length: from 25.5 to 13.0 cm; $p < 0.05$; symptomatic area, width: from 15.3 to 7.5 cm; $p < 0.05$	
Tagliafico 2021 (e29)	Meta-analysis 2a*[3]	Infiltration*[1] Surgery	(n = 57) (n = 92)	Freedom from symptoms after:	Infiltration: 85% (49/57) Surgery: 80% (74/92)
Lu 2021 (e11)	Meta-analysis 2a*[3]	Infiltration Decompression Neurectomy	(n = 78) (n = 496) (n = 96)	Freedom from symptoms after:	Infiltration: 22% Decompression: 63% Neurectomy: 85%
Khalil 2008 (e21) 2012 (e19)	Systematic review 2a	Spontaneous course Infiltration Decompression Neurectomy	(n = 29) (n = 157) (n = 300) (n = 48)	Reduction of/freedom from symptoms after:	Spontaneous course: 69% Infiltration: 83% Decompression: 88% Neurectomy: 94%

Classification according to the hierarchy of the Oxford Centre for Evidence-Based Medicine, 2009 (1a: systematic review of RCT; 1b: single RCT; 2a: systematic review or meta-analysis of cohort studies; 2b: single cohort study or single RCT of low quality; 3a: systematic review of case–control studies; 3b: single case–control study; 4: case series, cohort studies, and case–control studies of low quality; see www.cebm.ox.ac.uk/resources/levels-of-evidence/oxford-centre-for-evidence-based-medicine-levels-of-evidence-march-2009).

painDETECT, A scientific questionnaire for pain screening and pain documentation in physicians' offices and hospitals; OS, observational study; PSQI, Pittsburgh Sleep Quality Index; QOL, quality of life; RCT, randomized controlled trial; SF-36, 36-Item Short-Form Health Survey; SWMT, Semmes–Weinstein Monofilament Test; TENS, transcutaneous electrical nerve stimulation; VAS, visual analog scale for pain

*[1] Ultrasound-guided infiltration

*[2] Stimulator-guided infiltration: a needle electrode is advanced towards the LFCN under electrostimulation until paresthesia is noticed in the typical distribution of the nerve.

*[3] Analysis of mainly retrospective OS and case series

Further details of the studies can be found in the *eBox*.

common with carpal tunnel syndrome, an association with pregnancy has been described (12). An iatrogenic lesion can result from surgery, e.g., pelvic or inguinal interventions or harvesting of bone from the iliac crest. Furthermore, MP may arise as a complication of perioperative positioning (e.g., the lithotomy position, the beach-chair position, or the prone position) (13–15). Clusters of such cases have been published since the beginning of the COVID-19 pandemic (16–20).

The aim of this review article is to summarize the current state of knowledge on the diagnosis and treatment of MP and provide an overview of recent developments.

Method

The Medline database was selectively searched via PubMed for publications in the past 20 years (2002–2022) containing the term "meralgia paresthetica". A total of 908 records were identified. Two of the authors (CS, MH) carried out the search independently (cut-off date: 1 November 2022) and compared their findings. The overview of treatment recommendations is based on prospective patient data together with the meta-analyses and systematic reviews that were available *(Table 1)*. Isolated retrospective data and case series were not listed separately.

Results

Anatomical and clinical presentation

The LFCN originates mainly from the spinal nerves L2 and L3. It runs over the lateral margin of the psoas muscle and the iliacus muscle to the ventrolateral portion of the thigh in the area of the anterior superior iliac spine (ASIS) and the lateral inguinal ligament *(Figure 1)*. The site of compression of the LFCN is often at or near the inguinal ligament, where several different anatomical variants that may hamper diagnosis and treatment have been described. The nerve may take a transligamentous or subligamentous course or, less frequently, may pass through the sartorius muscle or over the ASIS lateral to the ligament (21).

The typical symptoms are burning, sometimes stabbing sensations and pains on the ventrolateral surface of the thigh extending down to not far above the knee. The area affected can often be precisely delimited by the patient. Persistence of the symptoms may lead to permanent hyposensitivity and vegetative disturbances such as reduced hair growth in the area concerned (22, 23). The LFCN is a purely sensory nerve, so there are no motor deficits. In the presence of severe symptoms, however, restriction of movement or sparing of the affected leg to avoid pain may be observed. Frequently, an area around where the nerve emerges from under the inguinal ligament is painful on compression (23). The symptoms are exacerbated by standing or overextending the leg for a long time. Aggravation of the symptoms by sleeping supine with the leg extended (meralgia paresthetica nocturna) has also been reported. Relaxation of the LFCN by sitting or flexing the hip may relieve the symptoms.

Diagnosis and differential diagnosis

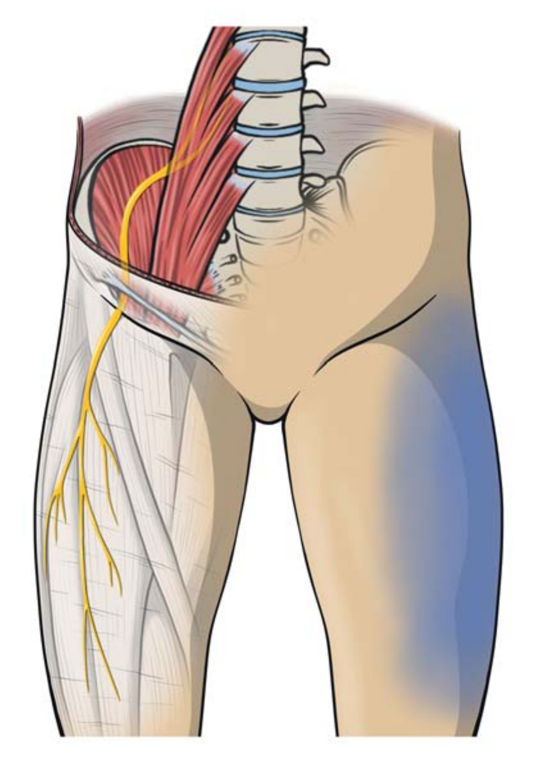
Hypesthesia is the symptom most commonly reported in typical MP (7). In cases where sensory disturbance is absent and pain is the principal symptom, the diagnostic work-up should begin with a manual clinical examination to rule out a myofascial pain syndrome of the thigh, in which the location of the pain may correspond precisely to that in MP, with trigger points in the gluteal musculature and the tensor fasciae latae muscle (24).

While typical MP is diagnosed by clinical examination, atypically located symptoms require an extended diagnostic process (25). If the patient complains of symptoms radiating from the spine to the medial thigh or even extending below the knee, and if there are, for example, reflex deficits or pareses, radiculopathy may be to blame (26). Radiation of symptoms into the groin may indicate involvement of another peripheral nerve (genitofemoral nerve, ilioinguinal nerve). Magnetic resonance imaging (MRI) of the pelvis may help to exclude urogenital or gynecological conditions. Nowadays, high-resolution MRI sequences can detect compression- or trauma-related signal alterations in the LFCN with high sensitivity and specificity *(Table 2)* (27).

The increasing availability of high-resolution ultrasonography is helpful both for diagnosis (localization of the nerve, increased accuracy of infiltration, exclusion of rare entities such as neurinomas) and for treatment (intraoperative nerve localization) (28, 29). Typical in compression neuropathy is enlargement of the LFCN's cross-sectional area and hypoechogenicity of the nerve fascicles (29). Some authors rate a cross-sectional area of > 5 mm² as pathological (30, 31). Applying this criterion, two studies found sensitivity of 87–95% and specificity of 90–95% (30, 31). A recent review, however, indicates high variability of the LFCN in respect of its division into smaller branches, meaning that the cross-sectional area is a parameter of limited applicability (29). Comparison of the affected and unaffected sides may be helpful.

Electrophysiological examinations are technically problematic, and the results not always conclusive, due to the high frequency of obesity among the patients. The sensitivity of these tests can be enhanced by neurosonography-guided electrode placement (32). Sensory evoked potentials (SEP) or the sensory conduction velocity of the LFCN can be measured

FIGURE 1



The anatomical course of the right lateral femoral cutaneous nerve and the area typically affected by symptoms of meralgia paresthetica in the left thigh

Our heartfelt thanks to Dr. Roberto Ferrarese (Department of Neurosurgery, University Hospital Freiburg) for drawing the illustration

orthodromically or antidromically on both sides for purposes of comparison (31, 33, 34). While some authors view only measurement of the sensory conduction velocity as worthwhile, others attach high importance to SEP, particularly in the presence of obesity (35–37).

A recently developed diagnostic technique, 3-mm punch biopsy from the affected cutaneous area to demonstrate loss of small intradermal nerve fibers, is restricted mainly to academic centers (38).

The increasing use of MRI and SEP as routine procedures in clinical diagnosis was shown by a recently published study evaluating data from the German Federal Statistical Office (39). *Table 2* summarizes the clinical and instrument-based methods used for diagnosis.

In the absence of a guideline, we present in *Figure 2* the expert-opinion-based treatment algorithm that we customarily use. Should infiltration prove unsuccessful, the next step is individualized differential diagnosis. If this reveals no other pathology, infiltration can be tried again, on the basis that the anesthesia may have been inadequate on the first attempt. Given the anatomical variations in the course of the LFCN, neurosonography may be helpful. The transition from diagnosis to treatment can be viewed as smooth, particularly when additional corticosteroids are given because of their decongestant action.

TABLE 2

The pillars of diagnosis

Symptoms	Imaging	Electrophysiology	Infiltration
Ventrolateral thigh Paresthesia Dysesthesia Hypesthesia Pain (possibly neuropathic)	**Neurosonography** Hypoechogenic fascicle with pseudoneuromatous enlargement of the nerve cross section Sensitivity: 87–96% (30–32) Specificity: 90–96% (30–32)	**SNAP LFCN** Delayed latency + loss of amplitude (bilateral comparison!) Sensitivity: n.d. Specificity: > 98% (35)	**Probatory local infiltration** Local anesthetics (e.g., bupivacaine 0.75%) ± corticosteroids (e.g., dexamethasone 4 mg)
Clinical tests: Hoffmann–Tinel sign medial to ASIS “Reversed” Lasègue	**MRI of inguinal region** T2 hyperintensity along the nerve Sensitivity: 71–73% (28) Specificity: 94–95% (28)	**SEP in lateral thigh** Delayed latency Sensitivity: 52% (38) Specificity: 76% (38)	

MRI, Magnetic resonance imaging; LFCN, lateral femoral cutaneous nerve; n.d., no data; SEP, sensory evoked potentials; SNAP, sensory nerve action potential; T2, MRI with contrast enhancement

Conservative treatment, infiltration procedures, and radiofrequency treatment

Conservative treatment focuses on reduction of the factors that cause or intensify nerve compression, for example avoidance of tight clothing and constrictive belts around the waist. Together with the general recommendation to lose weight, physiotherapy/manual therapy exercises are thought to bring about loosening and flexion of the muscles and tendons along the course of the LFCN. *Table 1* shows the current state of knowledge. The “spontaneous improvement rate” (without intervention) of 69% (62% complete, 7% partial) cited by Khalil et al. is based on a single study of a large number of cases published in 1938 (40).

With regard to medication, the first-line treatment-comprises WHO step I analgesics with combined antiphlogistic action and antineuropathics, in combination with tricyclic antidepressants if indicated (e1–e3). Other treatments that can be tried are muscle relaxants, local anesthetics, and transcutaneous electrical nerve stimulation (TENS) (e4–e6).

Topical infiltration of local anesthetics with or without corticosteroids is an option for both diagnosis and treatment (e7). There is no evidence on the additional use of corticosteroids specifically for MP, only for other compression neuropathies (e8). The site for infiltration of the LFCN is where it emerges from under the inguinal ligament, around one to two fingers medial and caudal to the ASIS. Alternatively, infiltration of the nerve can take place under neurosonography guidance (29). If at least medium-term response (a few days or weeks) is achieved, infiltrations can be repeated. The type of preparation used, the dosage, and the precision of infiltration can be expected to affect the efficacy. Two retrospective studies report short-term amelioration of symptoms in 90–91% of cases (evidence level 4) (e9, e10). A randomized controlled trial on 54 patients found a group difference for pain reduction and sensory function in the thigh in favor of infiltration compared with TENS and placebo (evidence level 2b; see *Table 1*) (e6). However, a recent meta-analysis found complete freedom from pain after infiltration in only 22% of patients (evidence level 2a) (e11).

Before infiltration, the patient is usually informed of the risk of infections, allergic reactions, internal bleeding, and nerve injury. However, these complications have not been reported in large case series of infiltration treatment for MP. The only adverse event described, in 5% of cases, is transient quadriceps paresis with a danger of falling; complete regression ensued within 3 hours (e12, e13).

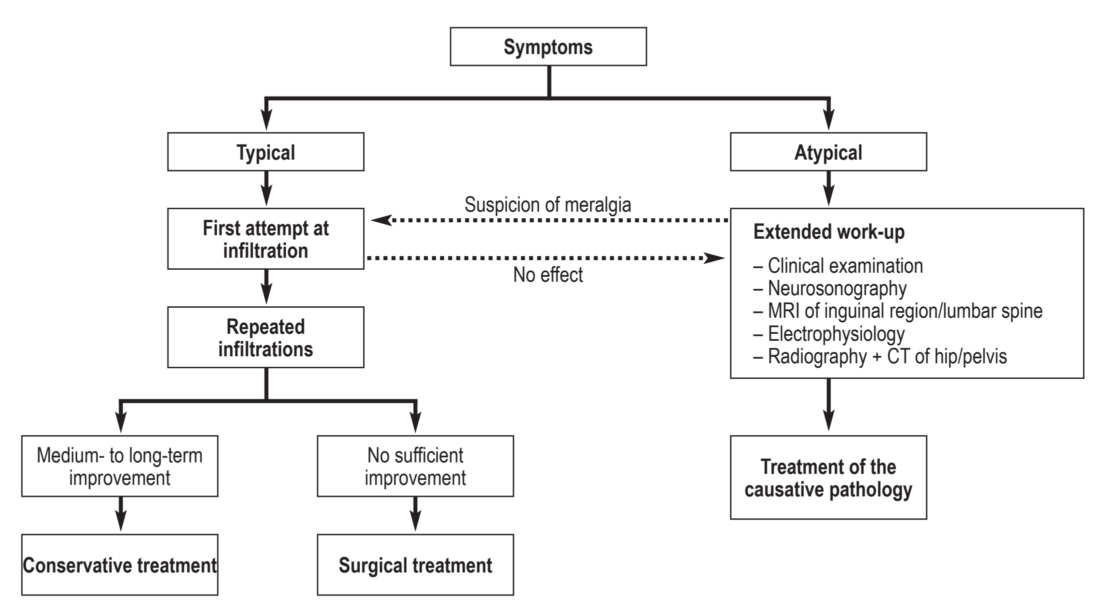
Another mildly invasive therapy option is radiofrequency treatment. Following administration of a local anesthetic, a catheter is positioned in the vicinity of the LFCN and high-frequency current is applied for a short time, raising the temperature of the surrounding tissues to a maximum of 42 °C. Two case series report complete freedom from symptoms in two thirds of patients (e14, e15). However, the evidence is too sparse for formulation of a treatment recommendation (e16). With regard to radiofrequency treatment in MP, a small case series (n = 11) describes no complications either periprocedurally or later (e14).

Only if no spontaneous recovery occurs, or the symptoms persist despite conservative treatment, should more invasive procedures be used *(Figure 2)*. The evidence for spontaneous amelioration of or freedom from symptoms with conservative treatment is, as already mentioned, sparse. There are also no data on the best time to initiate treatment. In patients with carpal tunnel syndrome, a trial showed that although a satisfactory outcome can be achieved by surgical treatment in very advanced cases, regression of the pain and sensory deficits is often only partial (e17).

Surgical treatment by means of decompression, neurectomy, and neuromodulation

In surgical decompression the LFCN is identified distal to the inguinal ligament, traced proximally, and freed

FIGURE 2



Algorithm for the treatment of patients suspected of having meralgia paresthetica
CT, Computed tomography; MRI, magnetic resonance imaging

from connective tissue adhesions and any other compressive factors. The site of maximal constriction is usually in the area of the inguinal ligament. Identification of the LFCN may be challenging for inexperienced surgeons owing to the nerve's anatomical variability. Decompression of the LFCN can also be achieved via a suprainguinal approach, which may facilitate location of the nerve especially in patients with less common anatomical variants. Decompression has the advantage of retention of sensory function in the ventrolateral thigh. *Figure 3* shows the intraoperative situation.

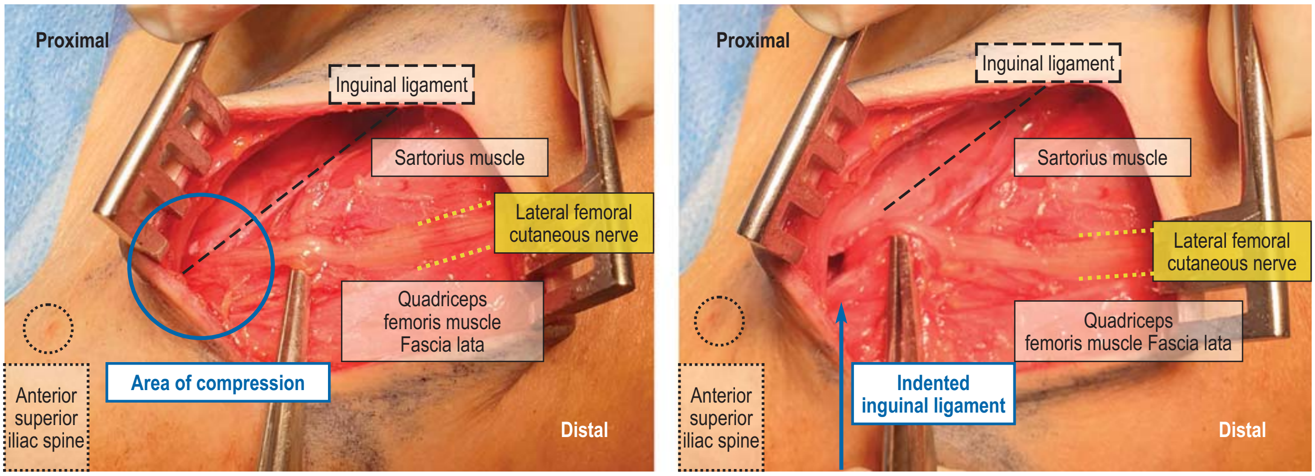
In contrast to decompression, neurectomy involves complete division of the LFCN, usually proximal to the inguinal ligament. This leads to permanent anesthesia in the tissues supplied by the portion of the nerve distal to the site of transection (28). According to a single-center study, patients do not find the lack of sensation bothersome (e18). Decompressive procedures are preferred by most neurosurgeons in Europe (e19, e20). A recent meta-analysis revealed that neurectomy was associated with better pain relief and lower revision rates. In this analysis, 85% of patients reported postoperative freedom from pain after neurectomy versus only 63% after decompression (evidence level 2a) (e11). A systematic review by Khalil et al. showed amelioration of symptoms in 88% of cases (264/300) after decompression and 94% (45/48) after neurectomy (e19). Alleviation of or freedom from symptoms was also achieved in 83% of cases (130/157) after infiltration treatment (e19, e21). Ultimately, both this review and a study by Payne et al. addressing similar questions come to the conclusion that there is no evidence for superiority of either of the two principal surgical procedures (e22) *(Table 1)*. The findings of both reviews are based predominantly on data from retrospective studies. Summing up, Payne et al. state that the evidence is too sparse for a meta-analysis.

Large case series have found that the most commonly occurring complication after surgical decompression or neurectomy is hematomas requiring nerve decompression surgery (4.8–6.7%), followed by marked subcutaneous effusions (4.4%), disorders of wound healing (2.4%), and wound infections (2.2%) (e23, e24).

More invasive procedures such as spinal cord stimulation have been described for refractory cases (e23, e25). One treatment option that may well be used more frequently in future because of technical advances is peripheral nerve stimulation. This involves placement of a probe adjacent to the LFCN, either in open technique or by ultrasound-guided insertion. Neither the stimulator nor the energy source needs to be implanted, which reduces both the invasiveness of the intervention and the associated morbidity. Positive effects of this procedure have already been documented in other neuropathies, e.g., in the lower extremities, in amputation-related pain, and in chronic pelvic pain (e24). To date there are only two case reports of its use in MP (e26, e27). Treatment of MP by means of peripheral or spinal neuromodulation systems remains a special case after exhaustion of all other treatment options.

Discussion

The quality of studies on the optimal treatment for MP has improved over the past 20 years. According to our



Intraoperative view of an infrainguinal approach with decompression of the right lateral femoral cutaneous nerve

research, however, this evidence is based on only two randomized clinical trials and two prospective observational studies, all with small numbers of cases, together with systematic reviews or meta-analyses including predominantly retrospective studies and case series. Evidence level 2a is thus attained for surgical and nonsurgical treatments. Advances in imaging and neurophysiological diagnostic techniques facilitate clinical diagnosis. The symptoms can be ameliorated in up to 70% of patients by means of conservative treatment, especially when causative factors can be identified and positively impacted (e19). With enhanced pain medication and infiltration treatment, satisfactory outcomes can be achieved in 22–85% of patients (e28, e29). The evidence comes predominantly from retrospective studies. If there is no response to treatment, interventional options such as radiofrequency treatment, decompression, and neurectomy should be discussed (e30). The evidence level for the optimal form of surgical treatment is currently no higher than 2a. An advantage of decompression is the retention or potential restoration of sensory nerve function, while a factor in favor of neurectomy is the low likelihood of recurrence (e11, e31).

Despite the apparent simplicity of the clinical picture of compression of one single sensory nerve, interdisciplinary cooperation ranging from noninvasive procedures to surgery is recommended for the treatment of MP. To optimize the treatment pathways, the clinical factors and associated treatment outcomes must be documented in structured fashion, because the quality of the evidence with regard to diagnosis and to treatment is excessively low for this relevant and increasingly common disease.

If we are to close the gaps in the evidence and improve quality further, well planned prospective studies should be conducted in which:

- The effectiveness of conservative measures is verified
- The efficacy of infiltrations and more invasive treatments is compared with conservative treatment and the spontaneous course
- The long-term outcome after invasive procedures is investigated

Conflict of interest statement
The authors declare that no conflict of interest exists.

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► **Supplementary material**
eReferences, eTables:
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Supplementary material to:

Meralgia Paresthetica: Relevance, Diagnosis, and Treatment

by Christoph Scholz, Marc Hohenhaus, Maria Pedro, Anne-Kathrin Uerschels, and Nora F. Dengler

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eBOX

Supplement to Table 1

- Kiliç (e6): Detailed results (preoperative vs. 1 month postoperative)

  Ultrasound-guided infiltration:
  - VAS from 1.88 to 0.18 ($p < 0.05$)
  - PainDETECT from 11.65 to 4.35 ($p < 0.05$)
  - PSQI from 6.94 to 5.94 ($p > 0.05$)
  - SWMT from 1.59 to 0.82 ($p < 0.05$)
  - SF-36 mental component score (MCS) from 41.18 to 42.32 ($p > 0.05$)
  - SF-36 physical component score (PCS) from 43.28 to 45.17 ($p > 0.05$)

  TENS:
  - VAS from 3.31 to 2.5 ($p < 0.05$)
  - PainDETECT from 14.88 to 9.38 ($p < 0.05$)
  - PSQI from 7.44 to 4.94 ($p > 0.05$)
  - SWMT from 2.31 to 1.94 ($p > 0.05$)
  - SF-36 MCS from 43.61 to 39.43 ($p > 0.05$)
  - SF-36 PCS from 36.05 to 40.87 ($p > 0.05$)

  Sham TENS:
  - VAS from 2.81 to 1.62 ($p > 0.05$)
  - PainDETECT from 11.1 to 6.41 ($p < 0.05$)
  - PSQI from 6.43 to 4.61 ($p > 0.05$)
  - SWMT from 1.95 to 1.5 ($p > 0.05$)
  - SF-36 MCS from 45.71 to 46.74 ($p > 0.05$)
  - SF-36 PCS from 38.4 to 40.78 ($p > 0.05$)

- Kalichman (e32):
  The VAS in this study relates to meralgia paresthetica symptoms (pain, burning, paresthesia) and the possible scores range from 0 to 100. The impact of meralgia paresthetica on the QOL is rated on a scale from 0 (no effect) to 100 (extremely low QOL). The authors describe this as the VAS QOL according to de Boer et al. (e33).

- Tagliafico (e29):
  The meta-analysis includes seven surgical studies (5× decompression, 1× neurectomy, 1× decompression and transposition). In transposition, the nerve is displaced ca. 2 cm to medial after decompression in order to avoid postoperative symptoms from scar formation and remove tension along the course of the nerve. However, there is only one single clinical study of this procedure ($n = 10$) (e34, e35).

Questions on the article in issue 39/2023:

Meralgia Paresthetica: Relevance, Diagnosis, and Treatment

cme plus+

The submission deadline is 28 September 2024. Only one answer is possible per question. Please select the answer that is most appropriate.

Question 1

In meralgia paresthetica, which of the following nerves is affected by compression or injury?

a) The superficial peroneal nerve
b) The ischiadic nerve
c) The lateral femoral cutaneous nerve
d) The obturator nerve
e) The saphenous nerve

Question 2

Various (possible) risk factors for the development of meralgia paresthetica are mentioned in the article. Which of the following is not one of these risk factors?

a) Diabetes mellitus
b) Obesity
c) Clothing that is too tight
d) Other nerve compression syndromes
e) Endurance sports

Question 3

Which of the following combinations of spinal nerves principally gives rise to the nerve involved in meralgia paresthetica?

a) L4 and L5
b) L5 and S1
c) S4 and S5
d) L2 and L3
e) L4 and S2

Question 4

What does the acronym SEP stand for in the article?

a) Sensory evoked potentials
b) Sensory elongated potentials
c) Sensory excitatory peaks
d) Sonographically evoked potentials
e) Sonographically encompassed potentials

Question 5

Radiofrequency treatment functions according to one of the following principles. Which one?

a) Temporary cooling of the tissue to a minimum of 22 °C
b) Temporary heating of the tissue to a maximum of 42 °C
c) Temporary cooling of the tissue to a minimum of 13 °C
d) Temporary heating of the tissue to a maximum of 46 °C
e) Alternating heating (40 °C) and cooling (10 °C) of the tissue

Question 6

According to a systematic review and a meta-analysis, what proportion of patients with meralgia paresthetica are free of symptoms after neurectomy?

a) 35–55%
b) 55–75%
c) 81–89%
d) 85–94%
e) 99–100%

Question 7

Which of the following reflexes is a sign of meralgia paresthetica?

a) The Hoffmann–Tinel sign
b) A positive Babinski sign
c) The Chaddock reflex
d) The Oppenheim reflex
e) The Lasègue sign

Question 8

What does the acronym TENS stand for in the article?

a) Transient electrical nerve sensitization
b) Transcutaneous electronic nerve stimulation
c) Transient extrinsic nerve stimulation
d) Transcutaneous electrical nerve stimulation
e) Transcutaneous effective nerve stimulation

Question 9

Which area is affected by meralgia paresthetica?

a) The dorsolateral thigh
b) The ventrolateral lower leg
c) The dorsomedial thigh
d) The dorsomedial lower leg
e) The ventrolateral thigh

Question 10

Which of the following do the authors of the article suggest as first-line procedure in their treatment algorithm for patients with the typical symptoms of meralgia paresthetica?

a) Decompression
b) Neurectomy
c) An attempt at local injection
d) Manual medicine
e) Physiotherapy