

DRASKO SIMOVIC, M.D.

Meralgia Paresthetica

History

Meralgia Paresthetica is also known as Bernhardt-Roth Syndrome. The term describes a clinical syndrome of lateral femoral cutaneous nerve entrapment causing pain and dysesthesia. This condition was described by Hager in 1885, then Bernhardt and Roth a few years later. The term was coined by Roth, from the Greek words *meros* for thigh and *algos* for pain.

Anatomy

The lateral femoral cutaneous nerve is a pure sensory nerve. It is formed by the posterior divisions of L2 and L3 lumbar spinal roots. The nerve courses through the psoas major muscle to the iliacus muscle and eventually under or through the inguinal ligament. The nerve enters the thigh within the fibrous compartment at ~10-15mm medial to the anterior superior iliac spine.

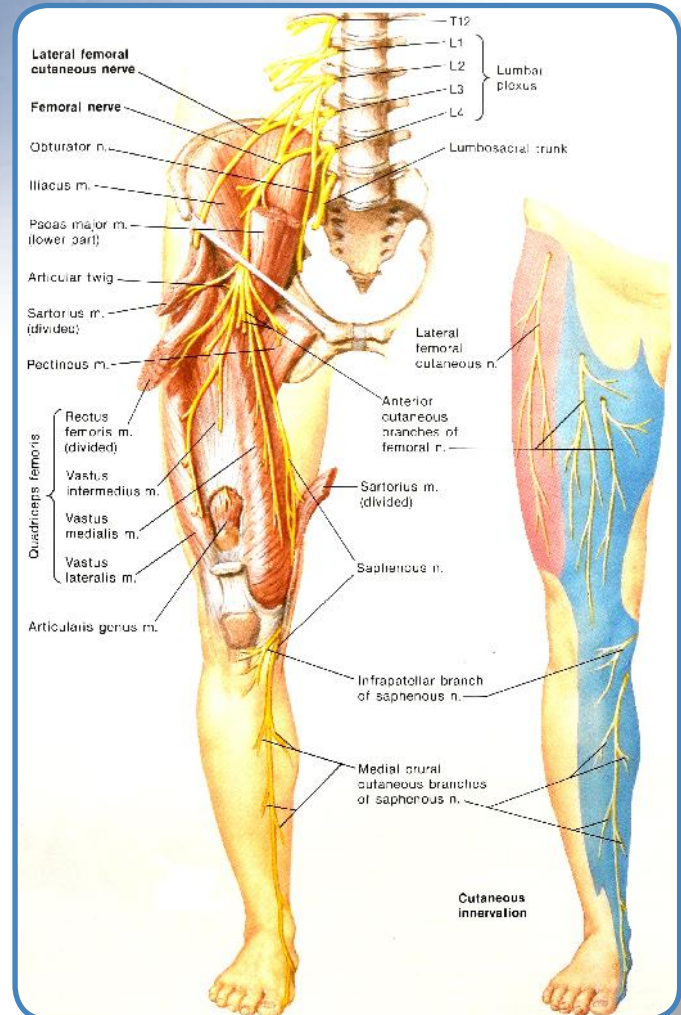
Compression

In the majority of cases, compression occurs as the nerve passes under the inguinal ligament. Development of this condition is most commonly seen in:

- Obesity
- Diabetes
- Older age
- Large pannus
- Tight belts
- Pregnancy

Some cases occurring after motor vehicle accidents from seat belt injury.

In some instances, injury can occur during local surgery (spinal procedures, hip prosthesis, aorto-femoral bypass). It is felt that positioning is the most likely reason for compression, rather than any direct damage to nerve. There have been reported cases in long distance walking and cycling.



Symptoms

Patients present with burning pain, dysesthesia (numbness, tingling) in the lateral thigh. Pain typically comes after onset of dysesthesia. Sensory changes can typically be clearly demarcated. No motor symptoms should be present. Some patients described worsening of pain with prolonged standing, thigh extension, and Valsalva maneuvers.

CAPE COD
6 Main Street
Hyannis, MA 02601
Tel: 508-775-2600

DRASKO SIMOVIC, M.D.
Board Certified in: Neurology, Clinical Neurophysiology,
Electrodiagnostic Medicine, Disability Analysis

LAWRENCE
25 Marston Street #208
Lawrence, MA 01841
Tel: 978-687-2586

NEUROMUSCULAR REVIEW

EMG LABORATORY

"COMMITTED TO EXCELLENCE IN NEURODIAGNOSTICS"

Differential Diagnosis

Patients presenting with these symptoms should also be evaluated for other neurologic diseases including lumbar radiculopathy and lumbosacral plexopathy. These are distinguished from meralgia paresthetica by neurological examination and EMG/NCS.

Diagnosis

Diagnosis of meralgia paresthetica can be made with the following techniques:

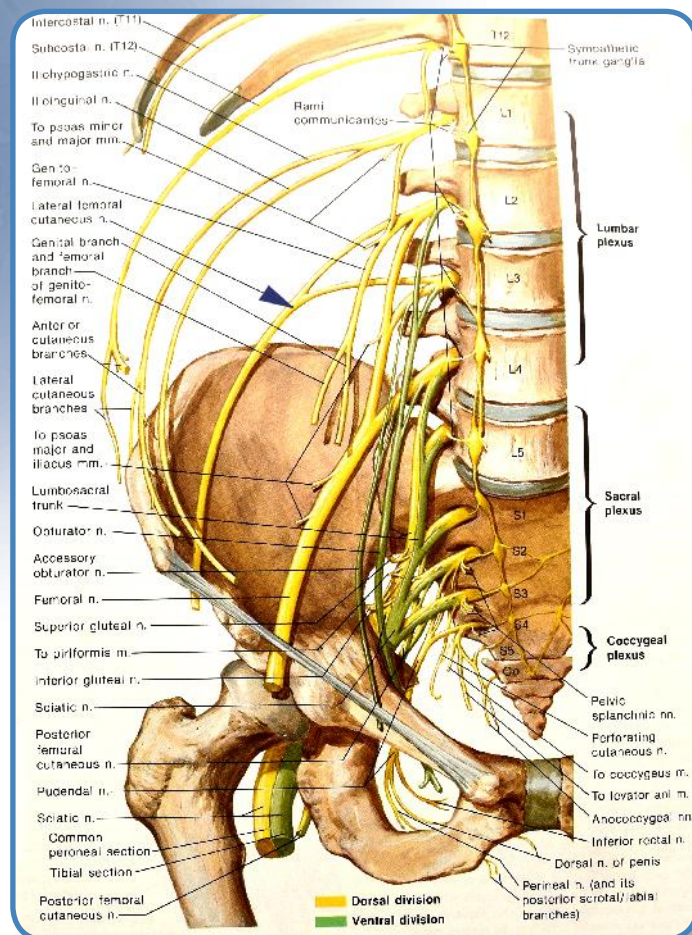
History: presentation of isolated sensory/pain in the typical distribution of the lateral cutaneous nerve

Neurological examination: sensory testing with pinprick and light touch should show an area along the upper outer thigh that has reduced sensation to these modalities. There should be a normal motor examination, negative straight leg raise test, and no hip/knee joint abnormality.

Electromyography (EMG) and nerve conduction studies (NCS) is recommended to assess for sensory abnormalities and muscle changes. Direct assessment of the lateral femoral cutaneous nerve is difficult but can be performed by a skilled neurophysiologist. In meralgia paresthetica there should be a normal EMG/NCS with exception of NCS of the lateral femoral cutaneous nerve which may show abnormalities.

Nerve block: performed just medial to the anterior superior iliac spine. If there is relief of pain this can also be used to confirm the diagnosis.

EMG/NCS is a physiologic study, performed by neurophysiologists. The study is used to assess peripheral nerves and muscles. The nerve conduction study is performed by measuring the conduction characteristics of the nerve that can also assess the status of the myelin and axons of the nerves. The EMG component of the study involves a small needle placed into the muscle at rest and then also while activated. The needle acts as a microphone and detects muscle activity at rest and in contraction. The EMG portion of the study in meralgia paresthetica serves to exclude other possibilities that are in differential diagnosis.



Treatment

Meralgia paresthetica is a relatively benign, self-limited disease. Treatment focuses on:

- reassuring the patient
- lifestyle changes that could improve symptoms, such as weight loss, and wearing looser garments.

It is vital to differentiate this condition from radiculopathy and plexopathy which are broadly treated with pain management, physical therapy, and/or surgery.

For patients with persistent, refractory pain, defined as symptoms ongoing despite lifestyle modifications and ongoing for greater than 8-10 weeks, additional management may be offered:

- NSAIDs
- gabapentin or pregabalin
- amitriptyline or duloxetine
- Valproic acid or carbamazepine
- Steroids
- Nerve block

In patients with chronic and severe pain (very rare), surgical referral can be made for decompression of the nerve. In these patients a more extensive diagnostic work up should be performed as compression can also in rare instances be related to masses or abscesses.

Newsletter courtesy of:

EMG Laboratory
Drasko Simovic, M.D.

Lawrence: 978-687-2486
Hyannis: 978-775-2600
www.emglaboratory.com

Comments or suggestions?
info@emglaboratory.com

Special thanks goes to our co-author Malveeka Sharma, M.D. - Boston Medical Center