

Bilateral meralgia paresthetica associated with pelvic inflammatory disease

Arthur S. Rotenberg, MD, CCFP

Meralgia paresthetica is a mononeuropathy involving the lateral femoral cutaneous nerve (LFCN), a purely sensory nerve that innervates the lateral part of the thigh. The first description of this disorder, in 1895, has been credited to Bernhardt,¹ but Hager² reported a case in 1885. Sigmund Freud suffered from the condition and reported the first bilateral case.³

The most common features of meralgia paresthetica are numbness (in 48% of cases), decreased sensation to pinprick (in 45%), pain (in 33%) and burning (in 21%).^{2,3} The most specific features are aggravation of the symptoms when the hip is extended (e.g., during bedrest), a well-defined area of sensory loss and a lack of motor abnormalities.⁴⁻⁶

Meralgia paresthetica is attributed largely to conditions such as obesity and pregnancy that exert pressure on the LFCN near the inguinal ligament.^{7,8} Internal infections were once thought to be an important cause⁸ but now are rarely associated with the condition; this change may have been due to the introduction of antibiotics. I describe a case in which meralgia paresthetica developed in a woman with pelvic inflammatory disease.

Case report

A 22-year-old woman presented with a 2-week history of increasing abdominal pain and menorrhagia associated with fever, chills, vomiting and diarrhea. She had noted increasing dysmenorrhea after replacement of her intrauterine device several months previously. On examination she had abdominal distension, guarding and rebound tenderness, as well as marked tenderness of the cervix, uterus and adnexa. The erythrocyte sedimentation rate was 40 mm/h, the leukocyte count was $18.8 \times 10^9/L$, and the results of testing for the β -subunit of human chorionic gonadotropin were negative. Diffuse peritonitis and bilateral salpingitis were found at laparoscopy, and culture of the peritoneal fluid yielded *Chlamydia*.

Intravenous therapy was given for 1 week with doxycycline, 100 mg twice daily, cefoxitin sodium, 1 g every 6 hours, and metronidazole, 500 mg every 8 hours. The associated ileus was severe enough to require nasogastric suction and intravenous hydra-

tion for 5 days. After discharge from hospital the patient received 2 weeks of oral therapy with cephalexin monohydrate, 500 mg every 6 hours, and doxycycline, 100 mg twice daily.

During the hospital stay the patient noted pain in the sacroiliac joints as well as a burning pain and numbness in the lateral aspects of both thighs. The symptoms were worse when she was lying flat; there were no other aggravating or relieving factors. She first reported the pain and dysesthesia 1 month later. At that time she had decreased sensation to pinprick and light touch in bilateral elliptical areas of about 20×10 cm in the regions supplied by the LFCNs. There was tenderness over the sacroiliac joints; however, there was no central back pain and no motor or reflex abnormality. Straight leg raising and femoral stretch testing did not aggravate the pain or dysesthesia. She had never been obese, worn tight belts or been pregnant.

Over the next 6 months the back pain resolved, but a 6-cm area of burning, numbness and hypesthesia remained in the regions supplied by the LFCN. There were no other abnormal neurologic findings, and the patient was otherwise well. The results of a 3-hour glucose tolerance and VDRL tests were normal, as were the results of nerve conduction studies in the legs and electromyography of the quadriceps on the right side.

Comments

It is widely accepted that meralgia paresthetica is due to entrapment of the LFCN at the inguinal ligament.^{4,6,9,10} An autopsy study revealed local demyelination at that site, even in some subjects who had no symptoms of peripheral neuropathy.⁹ This suggests that the nerve is vulnerable to subclinical damage. Perhaps pelvic inflammatory disease or other intra-abdominal inflammation can result in further compression of the nerve and overt meralgia paresthetica. This effect may occur at the inguinal ligament or higher up, along the "long, exposed course"¹¹ of the LFCN. Suber and Massey¹² reported a case in which compression of the lumbar plexus by a uterine leiomyoma had been discovered at surgery; the meralgia resolved after myomectomy.

Some early descriptions of meralgia paresthetica

From the Department of Family Medicine, North York General Hospital, Willowdale, Ont.

Reprint requests to: Dr. Arthur S. Rotenberg, 45 Glendora Ave., Willowdale, Ont. M2N 2V8

emphasized infection as the cause.^{1,7} Infection has become a less important cause, perhaps because of the introduction of antibiotics and the associated reduction in the severity of internal infections. The patient I have described had sufficient pelvic infection to cause ileus; this indicates a severity more characteristic of the preantibiotic era.

A search of the Medline database and the bibliographies of all available review articles on meralgia paresthetica did not yield any reports of an association between this neuropathy and pelvic inflammatory disease. In one article the authors stated that pelvic inflammatory disease, enterocolitis and appendicitis were all possible causes, but they gave no supporting documentation.⁸ In several reports meralgia paresthetica was associated with processes such as appendicitis, colitis and postoperative inflammation.^{1,7,8,13} In one case transient meralgia paresthetica was observed after abdominal hysterectomy and was thought to have been caused by postoperative inflammation.¹³

The mechanical effects of infection or inflammation on the LFCN may well have been the mechanism in the case reported here; they may also explain earlier reports of meralgia paresthetica after internal infection or abdominal surgery.

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