

Uncommon Manifestations: Sciatic and Thoracic Endometriosis

As we enter a turning point in healthcare, more physicians are beginning to recognize Endometriosis for the significant issue that it is. Better still, more teens and women with the disease are beginning to advocate for themselves - armed with education and knowledge about Endometriosis, they are becoming partners in their own healthcare and taking an active role in their disease management.

But we still have a long way to go. There are many who still maintain that Endometriosis "can be cured by pregnancy or hysterectomy," and who believe that the disease only occurs in and on the reproductive organs. Though referred to as "uncommon," two specific manifestations of the disease are becoming more prevalent. This recognition may be due in part to the practitioner's increased understanding and awareness of the disease, and/or to the patient's active role in her own care; speaking up and making herself heard about new or different symptoms she may be experiencing.

SCIATIC ENDOMETRIOSIS

Pelvic Endometriosis is a common gynecological problem. The most common sites are the ovaries, cul-de-sac, uterine tubes, the pelvic peritoneum, the recto-vaginal septum, the cervix and the bowel. Sciatic nerve Endometriosis is less common, but should be included in the diagnosis of pain in the sciatic nerve distribution.

The first case of sciatic Endometriosis was described by Denton and Sherill in 1955. Symptoms that may lead to the suspicion of Sciatic Endometriosis include: pain which begins just before menstruation and lasts several days after the end of the flow, motor deficit, low back discomfort radiating to the left leg, left foot drop and weakness, cramping in the left leg when walking for long distances, and tenderness of the sciatic notch. There is generally a previous history of pelvic Endometriosis. If left untreated, the symptoms can lose their cyclical nature with time, due to scarring; resulting in a progressively shorter pain-free interval until constant pain prevails.[1] Early recognition is necessary to prevent permanent damage to the sciatic nerve.[2] The disease may be seen on diagnostic imaging tests in select cases; other cases require visual diagnosis.

Sciatic Endometriosis is generally treated the same way as pelvic disease; surgical eradication and/or a course of medical therapy.

Extensive empirical data discussing this condition exists in peer-reviewed literature. In a 1999 Review of Neurology case report[3] authors Calzada-Sierra, Fermin-Hernandez, Vasallo-Prieto, Gomez-Fernandez and Santana de la Fe discussed a patient with cyclical sciatica due to implantation of endometrial tissue in the sciatic nerve in the region of the sciatic notch. Authors noted, "if it is not treated, a sensomotor mononeuropathy of the sciatic nerve develops." Their patient had complained of right-sided sciatic pain from the age of 36 years, and over the years a motor deficit had slowly and progressively appeared causing foot drop. The painful crises were related to her menstrual periods. At the age of 44 years, a pyramidal muscle syndrome was diagnosed and treated surgically. This was followed by increase in the crises of sciatic pain. A year later, she started to have sciatic pain on the left side, which was similar to that of the right side. At the time of publication, the patient was still being treated with depot medroxyprogesterone (Depo Provera),

and her pain has disappeared. Authors concluded that "cyclical sciatica due to endometriosis is little known and may lead to permanent disability. Computerized axial tomography of the pelvis using contrast material is very useful for diagnosis. The use of depot medroxyprogesterone seems to be a satisfactory treatment in some patients."

In a 1999 Fertility & Sterility article[4], authors Fedele, Bianchi, Raffaelli, Zanconato and Zanette published a study in which they attempted to assess the efficacy and diagnostic value of GnRH agonist (GnRH-a) therapy in cases of hidden sciatic nerve endometriosis. In this case report, authors reviewed the treatment of three patients with cyclic, catamenial ("upon menstruation") sciatica associated with pelvic endometriosis, who had electromyographic evidence of sciatic nerve damage but negative computed tomography (CT Scan) and magnetic resonance imaging (MRI) findings. Their patients were given a monthly administration of Lupron plus 25 mcg. of addback. As a result, all three patients had clear decreases in pain and partial amelioration of claudication. Authors concluded that "Endometriosis of the sciatic nerve may be hard to diagnose with the use of current imaging techniques, but may be proved by clinical response to GnRH analogue treatment and may be more frequent than previously thought."

Another report in a 1996 edition of the journal Spine presented by authors Dhote, Tudoret, Bachmeyer, Legmann and Christoforov outlined a review of a case of cyclic sciatica secondary to ovarian cyst endometriosis[5]. Authors noted that "Endometriosis of the sciatic nerve is rare, but must be included in the differential diagnosis of sciatic mononeuropathies." The authors reported a case of a patient whose cyclic sciatica was caused by an ovarian cystic endometriosis lesion. Magnetic resonance imaging permitted a specific diagnosis of this unusual cause of sciatica by showing a hemorrhagic mass in the region of the sciatic nerve. Authors further concluded that "early recognition is necessary to prevent permanent damage to the sciatic nerve."

In "Endometriosis of the Sciatic Nerve: Case Report Demonstrating the Value of MR Imaging," authors Descamps et al. stated that "Endometriosis...should be considered in menstruating women in view of the diagnostic strategy and ensuing therapeutic implications." Authors related a case of sciatic nerve involvement with Endometriosis in contact with the nerve in the left sciatic notch which was discovered by MRI. Authors concluded that "MRI was invaluable for the diagnosis, revealing a signal on the stem of the nerve suggestive of a lesion with haemorrhagic content."[6]

Hysterectomies may also be indicated as treatment for patients who have completed their families. One such case where a hysterectomy was effective treatment for the patient is presented in "Adenomyosis--an Unusual Cause of Sciatic Pain" by al-Khodairy AT; Gerber BE and Praz G.[7] Authors report the case of "a female patient who presented with a 5-month history of sciatic pain who had been referred for investigation and surgical treatment of a suspected herniated lumbar intervertebral disc. Because of an ill-defined clinical picture at admission, she was treated conservatively. After 2 weeks without any improvement, imaging of the spine by MR (magnetic resonance) was performed. No signs of a herniated disc or intraspinal, space-occupying lesion were apparent, but a right paramedian pelvic mass was seen. Ultrasonography confirmed an enlarged, irregular uterus. Hysterectomy abolished the symptoms."

An excellent review by Mazin Ellias, M.D., F.R.C.A., Director, Associate Professor, Pain Management Program, Medical College of Wisconsin, entitled "Endometriosis of the Sciatic Nerve"[8] outlines the importance of early diagnosis and detection to prevent permanent sciatic nerve damage. Dr. Ellias states that "physical examination findings may reveal various neurological deficits involving the sciatic nerve rootlets. There may be localized tenderness over the sciatic

notch, but this is not classical finding. Pelvic examination may be normal. Hormonal suppression of the endometrial tissue may also cause pain relief and aids in proper diagnosis. CT and MRI findings of endometriosis can be variable as they can appear as solid or complex cystic lesions, and involvement of the sciatic nerve at the sciatic notch has been a constant feature." Dr. Ellias further

states that "electromyography has been useful in diagnosis as well as differentiating between peripheral and root nerve involvement. However, normal findings on electromyography have been reported. An unequivocal diagnosis can be made by direct visualization during operative surgery/laparoscopy and confirmed by histopathology. The 'pocket sign' visualization under laparoscopy or surgery of a peritoneal evagination containing ectopic endometrial tissue has been described by Head et al. In patients with cyclic sciatic pain, this finding may be the only clue to the presence of endometriosis, however this sign may be overlooked by the surgeon."

THORACIC ENDOMETRIOSIS

Extensive literature exists on findings of thoracic (lung) Endometriosis in patients worldwide, the first of which date back as far as 1912. According to Dr. Andrew Cook[8], thoracic Endometriosis is divided into two parts: pleural, which is the lining of the lung, and parenchymal, which is the lung itself. The majority of cases occur in the pleura, rather than the lung itself.

Symptoms include:

Difficulty breathing

Deep chest pain

Pneumothorax (collapsed lung)

Pleural effusion ("water on the lung")

Bloody sputum occurring with menses

In a recent report, "Catamenial Pneumothorax with Diaphragmatic Endometriosis," authors Yoshida, Izumi, Hasegawa and Kubota[9] noted the experiences of a 30 year-old patient who had twice presented with pneumothorax that was related to the onset of menstruation. Upon thoracoscopy, the presence of blueberry spots and pinholes in the lateral part of the central tendon in the diaphragm were seen. Histological findings showed Endometriosis of the diaphragm. She was followed without hormonal therapy, but recurrent right pneumothorax occurred. She was then placed on Lupron for 5 months and remained asymptomatic 7 months after surgery.

In "Catamenial Pneumothorax--Endometriosis as a Multidisciplinary Challenge" by S. Leodolter and W. Marhold[10], authors noted, "...since the condition is poorly understood, patients with 'catamenial pneumothorax' tend to be subjected to often quite stressful surgical procedures. These do not provide a permanent cure, as shown by the presented case. Traditional hormonal regimens are also associated with high relapse rates. Consequently, abdominal hysterectomy with bilateral removal of the adnexa has been the treatment of choice if fertility was no longer desired. The battery of conservative treatment modalities has, however, recently been expanded by the use of GnRH analogues and antigestagens. As embryogenesis and the factors underlying the development of endometriosis are better understood and as the complex symptoms of the condition as well as the state-of-the-art therapeutic approaches are more widely appreciated, women afflicted with the condition should be able to benefit from a more rational and possibly even causal treatment concept."

In his 1991 book, "Endometriosis: Contemporary Concepts in Clinical Management," Dr. Bob

Schenkin wrote that "Endometriosis of the lung accounted for all reported cases of Endometriosis which occurred outside of the abdomen. Approximately 100 confirmed cases, and many more suspected cases, have been reported over the years."^[11]

As with Endometriosis in general, it is not definitively known why or how this manifestation of the disease occurs. It is thought, however, that circulating peritoneal fluid encourages endometriotic tissue to implant on the diaphragm. This in turn causes structural damage, such as minute holes, which then allow passage of the tissue into the lining of the lung.

Most patients with thoracic Endometriosis also have pelvic Endometriosis. Thoracic Endometriosis may be suspected based on diagnostic testing and patient symptoms, but surgery is still the gold standard for confirmation of diagnosis. Treatments include medical therapy and surgery.

Footnotes:

[1] "Endometriosis of the Sciatic Nerve" by Mazin Elias, M.D., F.R.C.A., Director, Associate Professor, Pain Management Program, Medical College of Wisconsin. Froedtert Memorial Lutheran Hospital/Grand Rounds April/June, 1999: Volume 6, Number 2

[2] & [5] "Cyclic sciatica. A manifestation of compression of the sciatic nerve by endometriosis: a case report;" Spine 1996 Oct 1;21(19):2277-9 (ISSN: 0362-2436). Dhote R; Tudoret L; Bachmeyer C; Legmann P; Christoforov B; Service de Medecine Interne, Hopital Cochin, Paris, France.

[3] "Bilateral Cyclic Sciatica Caused by Endometriosis," Rev Neuro (Jul 1-15;29(1):34-6, ISSN: 0210-0010), Calzada-Sierra DJ; Fermin-Hernandez E; Vasallo-Prieto R; Gomez-Fernandez L and Santana de la Fe from the Centro Internacional de Restauracion Neurologica, Ciren, La Habana, Cuba

[4] "Phantom Endometriosis of the Sciatic Nerve," Fertil Steril 1999 Oct;72(4):727-9 (ISSN: 0015-0282) by Fedele L; Bianchi S; Raffaelli R; Zanonato G; Zanette G; Department of Obstetrics and Gynecology, University of Verona, Italy

[6] "Endometriosis of the Sciatic Nerve: Case Report Demonstrating the Value of MR Imaging," Eur J Obstet Gynecol Reprod Biol 1995 Feb;58(2):199-202 (ISSN:

0301-2115). Descamps P; Cottier JP; Barre I; Rosset P; Laffont J; Lansac J; Body G, Department of Obstetrics and Gynecology, University Hospital, Tours, France

[7] "Adenomyosis-an Unusual Cause of Sciatic Pain" Eur Spine J 1995;4(5):317-9 (ISSN: 0940-6719). al-Khodairy AT; Gerber BE; Praz G, Department of Orthopaedic Surgery, Hopital de Pourtales, Neuchatel, Switzerland

[8] "Ask Dr. Cook," www.drcook.com [9] Kyobu Geka 1999 Nov;52(12):1040-2

[10] Gynakologisch-geburtshilfliche Abetlung, Krankenhaus Lainz, Wien

[11] "Endometriosis: Contemporary Concepts in Clinical Management," Robert Schenkin, MD

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