Case Report

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Depressive symptomatology in a female patient with Tarlov cyst

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Abstract

Introduction: The spinal perineurial cyst is a rare anomaly of the nervous system. It is also known as Tarlov cyst, since it was described for the first time by Isadore M. Tarlov. The pathology is defined as a cystic dilatation between the perineurium and endoneurium of spinal nerve roots, located at the level of the spinal ganglion and filled with cerebrospinal fluid but without communication with the perineurial subarachnoid space.

Case report: We present the case of a 56-year-old female who reported sudden onset of symptoms of a depressive symptomatology accompanied with acute pain in the lumbar area. Lumbosacral magnetic resonance imaging scan revealed Tarlov cysts.

Discussion: Radiological investigations in patients with depressive symptomatology may be substantial.

Keywords

Tarlov cyst, depression, pain, duloxetine, psychopathology

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Introduction

Tarlov cysts or spinal perineurial cysts are uncommon lesions. The pathology is defined as a cystic dilatation between the perineurium and endoneurium of spinal nerve roots, located at the level of the spinal ganglion and filled with cerebrospinal fluid but without communication with the perineurial subarachnoid space.[1] These are mostly incidental findings on magnetic resonance imaging (MRI) or myelograms. The first methodical description of perineurial cysts of the spinal region is credited to Isadore M. Tarlov during his postmortem study of filum terminale.[2,3] At the time of initial discovery, the main differential diagnosis of these cysts remained meningeal diverticula and long arachnoid prolongations. Most Tarlov cysts are discovered incidentally and are asymptomatic in nature. However, because of their natural tendency to increase in size with time, they may become symptomatic later in life.[4]We present a case of a female patient with Tarlov cyst and depression.

Case presentation

This is a case of a 56-year-old female patient reporting symptoms of low back pain, buttock pain, shoulder pain, arthralgias, and limited spinal mobility. The intensity of the pain that the patient experienced was described by her as a severe stabbing and shooting pain, splitting and exhausting, and sickening and very fearful, causing her severe discomfort. She had been suffering from back pain since the age of 51. The patient reported that during the last 2 years, she had been prescribed a combination of various medications for pain relief with only transient improvement. The patient was complaining of walking difficulties and presented with sudden right buttock pain, right inguinal fold pain, and low back pain for 2 months, with inability to walk and to sit down. Imaging a spinal MRI was performed and revealed a large cystic formation from three cysts compressing in the lumbar

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Figure 1. Lumbosacral magnetic resonance imaging scan showing sacral Tarlov cysts.

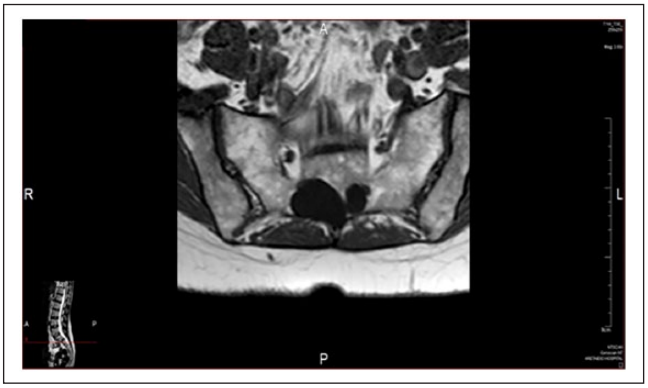

Figure 2. Typical MRI pattern of Tarlov cysts.

region. At levels 04-05 and 05-I1, small-scale circular projection of the intervertebral discs is observed, with no appreciable narrowing of the intervertebral tracts. Tarlov cysts were observed in the sacrum bone with widening of the segments which show a hardening edge and smooth limits. The bigger right cysts had a diameter of 2.7 cm and the left had a diameter of 1.7 cm. On the Short-Form McGill Pain Questionnaire,[5] she scored I-a = 24, II = worst possible pain, and III =2, while on the Beck Depression Inventory (BDI)[6] she had a score of 24. Her score on BDI was mainly shaped from her reported symptoms in the subscale that measures somatic-vegetative performance complaints (consisting from the last eight items of the BDI). She was prescribed duloxetine (30 mg/day), and the dosage of duloxetine was escalated to 60 mg/day after 2 weeks of titration and then 120 mg/day after 4 weeks with satisfactory results. The pain subsided along with depressive symptoms (Figures 1 and 2).

Discussion

Perineurial cysts may be symptomatic depending on their localization and size, and most of them are asymptomatic but only about 1% of patients may present various clinical symptoms.[7] Sensory disturbances, motor deficits, and dysfunction related to autonomic system are the most common.[8] These cysts, when they are in the sacral neural, cause pain, parethesias, and urinary and bowel disorders.[9] Patients with symptomatic perineural cysts complain often for mild depression, working problems, sexual disorders, and bowel or bladder symptoms.[10] In this case, the intensity of the pain that the patient experienced was described by her as a severe stabbing and shooting pain, splitting and exhausting, and sickening and very fearful, causing her severe discomfort. She was administered duloxetine. This medication was shown to be effective in several models of neuropathic pain. Duloxetine, a dual reuptake inhibitor of serotonin and norepinephrine, is approved for the treatment of major depressive disorder, generalized anxiety disorder, diabetic peripheral neuropathic pain, fibromyalgia, and chronic musculoskeletal pain in the United States. In Europe, duloxetine is also indicated for the treatment of stress urinary incontinence in women.[11] Acute pain induces depressed mood, and chronic pain is known to cause depression and pain. Pain causes sadness, anxiety, depression, and feelings of annoyance, and in patients with chronic pain, the mean prevalence of major depression is reported to be between 18% and 85%.[12] Pain adversely affects the prognosis and treatment of depression and vice versa. There is a significant correlation between the severity of pain and the degree of depression.[13]

Conclusion

The observations of this report provide supportive evidence that pain induces depressive symptomatology. Clinically speaking, the psychiatrist should bear in mind that many cases of depressive symptomatology could have an organic cause, and he or she should therefore proceed to more laboratory exams (e.g. imaging tests), including a computed tomography (CT) scan or an MRI.

Declaration of conflicting interests

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Ethical approval

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Informed consent

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