A Rare Cause of Common Pain: Herpes Zoster-Induced Sciatica

Uma Causa Rara de Dor Comum: Ciática Induzida por Herpes Zoster

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Dear Editor,

Lumbosacral radiculopathy, presenting as dysesthetic (abnormal and often uncomfortable sensations such as burning, tingling, or sharp pain) lower back pain radiating to the legs, results from compression or irritation of the nerve roots in the lumbosacral spine. A common form is sciatic nerve radiculopathy, where pain extends below the knee, mostly affecting individuals in their 40s and 50s, with a lifetime incidence of up to 40%.[1] While mainly caused by emerging nerve root compression, it can also result from various diseases, including infections like varicella-zoster virus (VZV).[1-3]

We report the case of a previously healthy 43-year-old man presenting with a one-week history of left lower limb persistent dysesthetic pain, extending from the plantar foot surface (L4/L5 dermatome) to the posterior calf and thigh (S1/S2 dermatome), with a 4/10 intensity in the numerical rating scale. After being questioned, he reported a two-day history of fever and a painful rash on the left internal malleolus (L4 dermatome). He self-medicated with non-steroidal anti-inflammatory drugs, and obtained moderate relief. Physical examination revealed a positive straight leg raise test on the left and painful gait limitation on tiptoes, with preserved muscle strength and deep tendon reflexes. Cutaneous inspection showed multiple grouped vesicles on an erythematous base mainly along the L4 sensory dermatome (Fig. 1). Laboratory tests revealed positive IgG and IgM serology for VZV, without other abnormalities including a negative HIV test. The diagnosis of herpes zoster-induced sciatica was established. The patient was treated with valacyclovir 1000 mg three times a day for seven days and paracetamol as needed for pain. At the one-month follow-up, he had fully recovered without complications.

The sciatic nerve, formed by the anterior rami of spinal nerves L4-S3,[1,4] innervates the dermatomes affected in this patient. Nerve compromise is mainly due to musculoskeletal causes, such as disc herniation or spinal stenosis, but non-musculoskeletal causes – including neoplastic, vascular, inflammatory and infectious diseases – can also be involved.[1-3] Varicella-zoster virus's primary infection typically occurs during childhood, resulting in varicella, which allows the virus to remain latent in sensory ganglia. Reactivation due to immunosuppression may cause herpes zoster,[5] characterized by prodromal pain often misinterpreted, followed by cutaneous lesions two to three days later, usually restricted to single or multiple contiguous dermatomes, evolving from erythematous papules to grouped vesicles or bullae within days, and possibly becoming pustular or hemorrhagic in severely immunosuppressed individuals.[5] Correct etiological diagnosis of VZV affecting the sciatic nerve allows for targeted and effective treatment, thus reducing future complications.

Figure 1 – Photographs of the posterior left leg (A) and medial side of the left foot (B). Multiple small, grouped vesicles on an erythematous base, with distribution along the L4, S1 and S2 sensory dermatomes.

We highlight the importance of considering non-musculoskeletal causes in the differential diagnosis of radiculopathy and emphasize the need for a meticulous examination, including the skin. The VZV, typically presenting with characteristic cutaneous findings, is an infrequent cause of sciatica that warrants targeted treatment.

AUTHOR CONTRIBUTIONS

MJC: Conception and writing of the manuscript.

JO, JT, CD: Data analysis and critical review of the manuscript.

All authors approved the final version to be published.

PROTECTION OF HUMANS AND ANIMALS

The authors declare that the procedures were followed according to the regulations established by the Clinical Research and Ethics Committee and to the Helsinki Declaration of the World Medical Association updated in 2013.

DATA CONFIDENTIALITY

The authors declare having followed the protocols in use at their working center regarding patients' data publication.

PATIENT CONSENT

Obtained.

COMPETING INTERESTS

The authors have declared that no competing interests exist.

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