

Superior Laryngeal Neuralgia After Acute Laryngitis and Treatment With a Single Injection of a Local Anesthetic

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Superior laryngeal neuralgia is described as a rare disorder characterized by severe pain in the lateral aspect of the throat, submandibular region, and underneath the ear, precipitated by swallowing, shouting, or turning the head. A trigger point is present on the lateral aspect of the throat overlying the thyrohyoid membrane. The etiology of superior laryngeal neuralgia is unclear, although infections may precipitate this disease.

We discuss herein the diagnosis and treatment of a patient with superior laryngeal neuralgia after having acute laryngitis.

REPORT OF A CASE

A 42-year-old man was referred to our department for severe recurrent pain in the right laryngeal region, in the submandibular region, and below the ear, lasting about 10 or 15 minutes. The pain occurred with shouting and moving the head. His history revealed acute laryngitis 2 weeks prior. The patient was treated with antibiotics for 2 weeks. After the completion of the medical treatment, the neuralgia developed. On physical examination, there was pain on palpation over the thyrohyoid membrane. Endoscopic examination only showed hyperemia and edema of the vocal folds; there was no mass lesion. The diagnosis of superior laryngeal neuralgia was made based on clinical findings. Magnetic resonance imaging (MRI) of the neck, which was performed 2 weeks after the beginning of the patient's complaints, excluded any structural lesions of the larynx and demonstrated edema of the true and false vocal folds and the thyroid cartilage. With a 24-gauge needle, 2-mL of the local anesthetic Jetokain (lidocaine hydrochloride, 20 mg/mL plus epineph-

rine, 0.0125 mg/mL; Adeka, Samsun, Turkey) was injected near the right thyrohyoid membrane. The symptoms decreased dramatically in a few minutes, and he had no pain for 1 year following the procedure.

COMMENT

Superior laryngeal neuralgia was first described by Tobold¹ as a laryngeal painful pressure point in 1866. In 1880, Fraenkel² analyzed laryngeal pains, which used to be grouped under the heading of "sensibility neuroses." He stressed that the presence of a laryngeal painful pressure point is necessary for the diagnosis and emphasized the absence of objective signs. He identified that the painful point was on the thyrohyoid membrane. The first case series about this syndrome was reported by Avellis³ on 14 patients in 1900. Afterwards, Boenninghaus⁴ reported a case series of 82 patients with neck pain with typical pressure points. He used the term *neuralgia* instead of hyperesthesia.

Superior laryngeal neuralgia is a rare disorder. The diagnostic criteria includes pain paroxysms, lasting for minutes or hours, triggered by swallowing, straining the voice, or head turning. A trigger point is present on the lateral aspect of the throat overlying the thyrohyoid membrane. Structural lesions should be excluded to confirm the diagnosis. Modern diagnos-

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tic techniques include electromyography to verify the function of the various laryngeal muscles. Computed tomographic scanning of the larynx can be performed to rule out any pathologic conditions in laryngeal and perilaryngeal structures. A typical pain-provoking trigger point is located on the foramen of the internal branch of the superior laryngeal nerve. A secondary trigger point is located in the sinus pyriformis, where the superior laryngeal nerve runs superficially.

The etiology is still unclear. A minor upper respiratory tract disease or a viral infection such as influenza may precipitate superior laryngeal neuralgia, but this is not usual. Bruyn⁵ reported the case of a 53-year-old man who developed superior laryngeal neuralgia 3 months after influenza. Grace⁶ reported a 45-year-old man who developed right-sided neuralgia following laryngitis, which was diagnosed as malaria. This neuralgia can also develop after microsurgery⁷ or trauma.⁸ Previous tonsillectomy has also been referenced.⁵ Lateral pharyngeal diverticulum was also described as a cause.⁹ Compression of the nerve by the superior thyroid artery and/or vein can cause superior laryngeal neuralgia. Viral infections were also described as a cause of this neuralgia. A viral infection may cause neuropathy by direct infection or inflammation of the nerve or by a nonspecific inflammatory response that secondarily involves a nerve.¹⁰

In the case reported herein, the diagnosis of acute laryngitis before the neuralgia developed was based on clinical and magnetic resonance imaging findings. Endoscopic examination showed hyperemia and edema

of the vocal folds. In some cases, recurrent local anesthetic injections may be necessary, but in our case, only 1 injection was enough for the treatment. Carbamazepine was successfully used to treat a patient who had bilateral superior laryngeal neuralgia.¹¹ Gabapentin treatment may be helpful for patients who have chronic neuropathic pain.¹² Laryngeal sensory neuropathy causing chronic cough may respond favorably to treatment with amitriptyline.¹³ The intracranial section of the upper vagal rootlets, percutaneous thermal rhizotomy, and extracranial section of the superior laryngeal nerve, which has a high recurrence rate, are the surgical methods to treat these kinds of neuralgias.¹⁴ In the present report, we describe a patient presenting with superior laryngeal neuralgia after having acute laryngitis. Superior laryngeal nerve block may be used in the diagnosis of this uncommon neuralgia, and only a single injection of a local anesthetic may be sufficient for treatment.

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