GLOS SOPHARYNGEAL NEURALGIA ACCOMPANY ED BY UNCONSCIOUSNESS*

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The purpose of this presentation is to discuss the diagnostic criteria of glossopharyngeal neuralgia and to emphasize the role of the syndrome that resembles that of the carotid sinus reflex, as seen in an occasional case.

The syndrome of glossopharyngeal neuralgia was first described by Weisenburg in 1910 in a case of angle tumor pressing on the 9th cranial nerve. Ten years later Sieurd and Robineau reported 3 cases of glossopharyngeal neuralgia. During the following 7 years until 1927, 2 cases had been reported by Harris, 3 9 from the Mayo Clinic, and 2 by Dandy. 2 Adson 1 in 1924 presented a technique for peripheral nerve section in the neck for this nerve. He said that it was a difficult surgical procedure because of the anatomical position of the nerve. At the time he had explored the possibility of cutting the nerve intracranially, by cadaver dissection, illustrating the unilateral cerebellar approach. However in 1927 Dandy reported the first intracranial section of the nerve, when he operated upon 2 patients within 6 weeks' time through a unilateral cerebellar craniectomy wound. Since then there have been many case reports illustrating the diagnostic and operative features of the disease.

Glossopharyngeal neuralgia differs from trigeminal neuralgia (tic douloureux) only in the location of the pain. Both have characteristic locations of the sudden, severe, paroxysmal, lightning-like pain, frequently set off by external stimuli. Each generally occurs in middle to late life. It remains only to distinguish the location of the pain by taking a careful history to establish the correct diagnosis. However, occasionally the patient is unable to give an exact account of the pain either because of its severity or because of mental deficits, such as senility, low mentality, etc. As we all know, this pain is located in the glossopharyngeal region, back of the tongue or in the ear. Confusion in diagnosis should occur only when the most severe pain is located in front of the ear or seemingly within it. Then the differential diagnosis of neuralgia of the nervus intermedius (nerve of Wrisberg), or 3rd division tic must be made. Cocainization of the throat usually, but not always, abolishes the pain for some minutes and thus aids the diagnosis.

Intracranial section of the 9th nerve alone generally relieves the pain entirely but if the ear pain is especially bad, section of the upper two filaments of the vagus should be done, which has been stressed by both Dandy and Spurling. 9

The resultant anesthesia is confined to the pharynx, nasopharynx, back of the tongue and tonsillar pillars. No motor deficit has been shown resulting from the paralyzed stylopharyngeus muscle.

A much less frequent involvement in the disease process is the resemblance to the syndrome of the hyperirritable carotid sinus. The carotid sinus receives its nerve supply from branches of the glossopharyngeal (nerve of Hering—an afferent branch),

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vagus and sympathetic nerves. The nerve of Hering has been shown to be the depressor nerve from the sinus and the vagal branches respond to chemical stimuli, such as atropinization. Weiss and associates worked out the carotid sinus syncope syndrome, describing three types: (1) vagal type, in which syncope results from cerebral anoxia caused by reflex cardiac asystole; (2) depressor type, in which syncope results from fall in blood pressure alone; and (3) cerebral type, in which syncope occurs without change in cardiac rate or blood pressure. When the neuralgic pain is unusually severe, bradycardia to asystole, hypotension, syncope and convulsive movements may occur. This group of symptoms resembling those of the carotid sinus reflex is mediated through the afferent glossopharyngeal branches in the throat rather than from within the sinus (nerve of Hering).

Following this work of Weiss, reports of intracranial section of the 9th nerve for hyperirritable carotid sinus reflex have appeared and the results are quite satisfactory.

Syncope and cardiac arrest associated with glossopharyngeal neuralgia were first referred to by Riley and associates in 1942, but no operation was performed. In 1948 Ray and Stewart reported a similar case and referred to another of Browder's which had been seen but not reported. Ray's patient was completely relieved by intracranial section of the 9th nerve.

In 1950 Roulhac and Levy were the first to note convulsive seizures associated with glossopharyngeal neuralgia. The patient was a 72-year-old white woman with a 20-month history of typical pain in the left side of her throat. Three weeks previous to admission, she began having convulsive movements shortly after the onset of a paroxysm of throat pain. There was twitching of the mouth, with clonic movements of the arms and upward deviation of the eyes. These would last only a few seconds. She was put on Phenobarbital and Dilantin, and improved to such a degree that the carotid sinus reflex element of the neuralgia was almost missed. She was discharged and 10 days later was readmitted, having many more paroxysms of pain with an increased number of convulsions. Then an electrocardiogram was done demonstrating asystole. The left glossopharyngeal and upper two filaments of the vagus nerve were sectioned intracranially with prompt and complete relief of the pain and convulsions. Roulhac and Levy believed that the syncope and convulsions occurred from afferent stimuli arising in the glossopharyngeal nerve rather than the carotid sinus, the mechanism being bradycardia with a fall in systemic blood pressure and cerebral anoxemia (Weiss—vagal group classification).

Richburg and Kern in 1953 reported a similar case. The patient was a Texas farmer, who had severe throat pain with frequent attacks of asystole, syncope and convulsions. The sinus syndrome was relieved by administration of atropine. Intracranial section of the 9th nerve and upper two filaments of the vagus nerve gave permanent relief of the entire syndrome.

The present report concerns another case of glossopharyngeal neuralgia associated with convulsions but without asystole or fall in blood pressure, which was initially mistaken for tic douloureux of the 3rd division of the left 5th cranial nerve. Temporal preganglionic subtotal sensory neurectomy was done without relief. The true nature of the pain was later recognized, and the 9th nerve was cut intracranially with prompt relief of all symptoms.

CASE REPORT

Case #11914-52. A 67-year-old colored woman was referred stating that for 3 months she had had intermittent, excruciating pain in the left side of the face. It would sometimes appear