THE VAGUS NERVE IN SURGICAL CONSIDERATION OFGLOSSOPHARYNGEAL NEURALGIA*

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GLOSSOPHARYNGEAL neuralgia is a syndrome of tic-like pain at the angle of the jaw, with radiation frequently appearing at the external auditory canal. It may be confused with trigeminal neuralgia1-3 of the 3rd division of the 5th cranial nerve and with neuralgia of the superior laryngeal nerve. Cocainization of the tonsillar area ordinarily serves to relieve and thus diagnose glossopharyngeal neuralgia, and cocainization of the pyriform fossa of the larynx is said to relieve neuralgia of the superior laryngeal nerve.2

Because of the anatomic and physiologic association of the 9th and 10th cranial nerves, it would not be surprising to find clinical association of the two in neuralgia at the angle of the jaw, but to our knowledge, this has not been reported. It is the purpose of this paper to report involvement of the vagus nerve in so-called glossopharyngeal neuralgia, and to report an improved method of diagnosis that we believe essential to the recognition of the unusual case where both the 9th and 10th nerves are involved in neuralgia and so to take appropriate surgical measures for relief.

CASE REPORTS

Case 1. V. J., a 48-year-old married female, was seen for the first time at the Tacoma General Hospital on Dec. 31, 1948. She gave a 5-year history of episodic pain radiating from the angle of the jaw to the left ear, “some way related to swallowing.” General physical and neurologic examinations were negative. X-ray of the skull showed a “chronic left mastoiditis,” although the patient was afebrile, and the left tympanic membrane showed no evidence of inflammation. Pain was relieved by cocainization of the left tonsillar fossa. Intracranial section of the left glossopharyngeal nerve was done Jan. 11, 1949, with relief of pain. Her course was uneventful and she was discharged on the 9th postoperative day.

Case 2. LeR. I., male, a 62-year-old retired school teacher, was seen Mar. 16, 1949. He gave a 7-year history of painful “spasms of the throat” initiated by talking and swallowing. Pain did not radiate to the ear. He had gone as long as 3 months without speaking because of fear of pain, and had been forced to give up his profession. Pain was relieved by cocainization of the left tonsillar fossa. He was admitted to the Tacoma General Hospital Mar. 16, 1949, where examination was negative except for electrocardiographic evidence of chronic myocardial anterior infarction, and the presence of a small rectal polyp. The left glossopharyngeal nerve

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was resected intracranially on Mar. 24, 1949, and the patient was discharged on the 7th postoperative day, completely free of pain.

Case 3. A. E. K., a 62-year-old female, was seen Mar. 23, 1949 at the Tacoma General Hospital. She gave an 8-year history of pain in the left side of the pharynx, radiating to the ear. This was episodic in nature and initiated by swallowing. Cocainization of the left tonsillar fossa relieved the pharyngeal pain only. Pontocaine block at the jugular foramen resulted, on two occasions, in complete relief of pain. Examination was negative, as were skull x-rays and routine laboratory studies. On May 19, 1949, the left glossopharyngeal nerve was sectioned intracranially. This did not relieve pain in the left ear and on May 24, 1949, the wound was reopened and the anterior half of the vagus nerve sectioned. This resulted in complete relief of pain, and the patient was discharged on the 6th day after the 2nd operation.

Case 4. B. M., a 64-year-old female, was seen Dec. 28, 1949. She gave a 10-year history of pain in the right tonsillar area with recent development of pain in the right external ear. The pain was episodic and originally initiated by swallowing, but in recent years not so affected. Physical examination revealed evidence of gall bladder disease, and blood studies showed the prothrombin time consistently below 50 per cent of normal. Cocainization of the tonsillar fossa did not relieve pain. She was admitted to the Tacoma General Hospital Jan. 3, 1950, for study and correction of the prothrombin deficiency. Pontocaine block of the right jugular foramen resulted in complete relief of pain. On Feb. 9, 1950, the 9th and anterior half of the 10th cranial nerves were resected with complete relief of pain. Her course was uneventful and she was discharged the 6th day after operation.

COMMENT

Four cases of glossopharyngeal neuralgia are presented, and all the patients received complete surgical relief of pain. Cases 1 and 2 appeared to be cases of typical glossopharyngeal neuralgia. In Case 3, the patient was only partially relieved of pain by section of the 9th nerve, and incomplete section of the 10th nerve was necessary to achieve complete relief. This should have been anticipated because cocainization of the tonsillar fossa gave only partial relief of pain and block of the 9th and 10th nerves at the jugular foramen gave complete relief.

In Case 4 the history appeared to have been typical of glossopharyngeal neuralgia at the onset 8 years previously, but at the time the patient was seen, the pain was largely in the ear and was unrelieved by cocainization of the tonsillar fossa. Jugular foramen block, however, gave complete relief of pain, and surgical section of the 9th nerve combined with partial section of the 10th nerve gave immediate surgical relief of pain.

SUMMARY

Four cases of glossopharyngeal neuralgia are presented, in 2 of which the 10th nerve appeared to be involved. Cocainization of the tonsillar fossa, combined with pontocaine block at the jugular foramen, made it possible to recognize this condition before surgery, and institute appropriate surgical attack.