Treatment options for glossopharyngeal neuralgia

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Glossopharyngeal neuralgia is a rare but painful affliction creating pain in the distribution of the nerve. It is an intermittent pain often provoked by non-noxious stimulation such as talking, swallowing or head movement. Glossopharyngeal neuralgia is best evaluated with a careful history, appropriate imaging and treated with pharmacologic approaches as well as surgery.

Glossopharyngeal neuralgia (GPN) is a rare condition involving throat and neck pain. The International Association for the Study of Pain (IASP) defines the condition as sudden, severe, brief, recurrent pains in the distribution of the glossopharyngeal nerve [1]. The International Headache Society recently classified GPN into classic and symptomatic [2]. They provided diagnostic criteria under the major group of cranial neuralgias and central causes of facial pain. Classic GPN is described as a severe transient stabbing pain experienced in the ear, base of the tongue, tonsilar fossa or beneath the angle of the jaw. The pain is felt in the distributions of the auricular and pharyngeal branches of the vagus and glossopharyngeal nerves. It is commonly provoked by swallowing, talking or coughing. It may remit for varying periods. Symptomatic GPN presents with the added presence of an aching pain that may persist between attacks. The diagnostic criteria are reviewed in Table 1.

Often, GPN occurs in episodes such as trigeminal neuralgia (TN), with each episode lasting for weeks to months, but in some patients can be unremitting. GPN is most often unilateral. The right side is affected more often with GPN than with TN. Bilateralism was noted less often in TN than in GPN cases [3]. Mechanical stimulation of the face by swallowing, talking and coughing often triggers the pain of GPN [4].

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Epidemiology

Katusic and colleagues published a 39-year retrospective study on the population of Rochester (MN, USA) [5]. A review of cases from 1945 until 1984 was carried out. It was found that the incidence rate of GPN in this population was 0.7 out of 100,000 for both sexes combined. There were no significant differences between the sexes. They concluded that GPN was generally a mild disease, since mild attacks were not uncommon, with only 3.6% of GPN sufferers having a second annual recurrence. Only 25% had to have surgery for symptom relief. In addition, 25% had bilateral symptoms.

Rushton and colleagues published a study in 1981 that examined GPN patients at the Mayo Clinic from 1922 to 1977 [6]. The authors reviewed 217 cases – a total of 57% were over than 50-years of age and 43% were between the ages of 18 and 50 years. A total of 161 patients had spontaneous remissions, 37 experienced no relief and 12% had bilateral pain. Syncope, which has been reported to occur with GPN, was rarely seen. A total of 25 patients experienced GPN and TN concurrently. Carbemazepine was the drug of choice and a total of 110 patients experienced good relief from pain with surgical intervention.

Patel and colleagues published a retrospective study of over 200 patients with GPN who underwent microvascular decompression (MVD) surgery at their institution over a 20-year period [7]. They found that 66.8% were female and 33.2% male. Mean age was 50.2 years, with a mean duration of pain of 5.7 years. The most common symptoms were throat and ear pain and throat pain alone. There was not a sided predilection with 54.8% of patients having left-sided symptoms and 45.2% having right-sided symptoms. Kondo and colleagues concluded in their study that GPN is rare, being seen 100-times less often then TN [8]. In summary, GPN is a relatively rare, usually unilateral painful condition that tends to be more common in middle-aged females.

Differential diagnosis

Differential diagnoses for GPN include, but are not limited to, TN, temporomandibular disorders (TMDs), Eagle's syndrome, certain short-lasting headaches and local pathology.

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