



Case Report on Glossopharyngeal Neuralgia

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ABSTRACT

Glossopharyngeal neuralgia is a rare pain syndrome in the sensory distribution of the ninth cranial nerve known as glossopharyngeal nerve. GN is characterized by brief episodic unilateral pain with sharp and stabbing character, with abrupt onset and cessation. Usually occurs in patients above 45 years. Treatment of choice includes carbamazepine, gabapentin, pregabalin and other membrane stabilizing agents. Here we report a case on glossopharyngeal neuralgia.

Keywords: Glossopharyngeal neuralgia, Trigeminal neuralgia, MRI, MRA, CT, Oxcarbamazepine

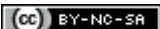
INTRODUCTION

Glossopharyngeal neuralgia is a very rare disease condition, in which the patient experience severe paroxysmal pain in the tongue, throat, ear, and tonsils. These symptoms last for few seconds to few minutes. Chewing does not trigger pain. But the pain is triggered by swallowing especially while drinking cold liquids, and sometimes by sneezing, coughing or yawning. Sometimes patient lose consciousness due to severe pain^[1]. The pain caused by GN is abrupt, short term. The GN pain is described as extremely painful, shooting or electric shock like, jabbing and burning^[2]. Sometimes the painful attacks are associated with an episode of syncope along with transient or persistent bradycardia. GN is usually misdiagnosed as trigeminal neuralgia because of similar characteristic of pain and mistreated. In essential or idiopathic GN, the cause is unknown. The

secondary causes contain, nerve root vascular compression, cervical malformations, oropharyngeal cancers, infections in the intraoral areas and peritonsillar infections. The incidence rate is equal in males and females. The incidence rates progress with age. The condition usually occurs above 45 years^[3]. This rare disease occurs with an incidence of 0.7 cases per 100,000 people. The glossopharyngeal nerve is very small and is located deep within the neck. Because of these features it is rarely noticed in surgical dissections and also known as 'the neglected cranial nerve'^[4]. Final diagnosis is based on; MRI, MRA, 3-dimensional computed tomography and 3-dimensional computed angiography. The drug of choice for the treatment of GN is carbamazepine, oxcarbamazepine, gabapentin, pregabalin and other membrane stabilizers. Carbamazepine is used based on baseline CBC, blood chemistry and

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urinalysis. Other class of drugs like SSRI and vitamin B12 are also used for the treatment of GN [5].

CASE REPORT

A 64 year old female patient was admitted to department of neurology with the complaints of acute onset of pain in the right half of face, which aggravated upon opening the mouth. A few months back the patient consulted a dentist with complaints of severe tooth ache. She assumed that the pain was associated with the dentures. The dentist prescribed some analgesics and she consumed it for few days. The relief was transient. After a few days she experiences another episode of sharp and stabbing pain. She consulted another doctor and he prescribed some NSAIDs and asked the patient to consult a neurologist if the symptom persists. A few days later she experienced an intense and electric shock like pain and it lasted for few minutes. At that point the patient found it too difficult to open the mouth even to speak. Pain was triggered upon speaking and sneezing. She consulted a neurologist for expert opinion. Upon physical examination the tongue was found red. She is a known case of DM, with a history of TMJ, CAD and hypertension 1 week back. She complained about irregular heart beat and intense ear pain which aggravates upon swallowing food. ESR was found to be elevated. Vitals were found to be stable. MDCT study of PNS revealed minimal mucosal thickening in the right maxillary and sphenoid sinuses and minimal deviation of nasal septum to left side. MRI revealed neurovascular compression of glossopharyngeal nerve. The posterior inferior cerebellar artery was found compressed. She was diagnosed with glossopharyngeal neuralgia. Patient was admitted in Neurology department and was treated with oxcarbazepine, antihypertensives, anti-anxiety and anti-diabetic medications. Symptoms were managed with therapy. Upon symptomatic relief, she was discharged with regular medications. The doctor advised regular medical checkup.

CASE DISCUSSION

Glossopharyngeal neuralgia is an uncommon disease condition, in which the patient experience severe paroxysmal pain in the tongue, throat, ear, and tonsils. These symptoms last for few seconds to few minutes. The pain is triggered by swallowing and sometimes by sneezing, coughing or yawning. Sometimes patient lose consciousness due to severe pain. The pain caused by GN is abrupt, short term. The GN pain is described as extremely painful, shooting or electric shock like, jabbing and burning. Sometimes the painful attacks are associated with an episode of syncope along with transient or persistent bradycardia. GN is usually misdiagnosed as trigeminal neuralgia.

Laboratory tests such as, complete blood count, ESR, anti-nuclear antibody and automated serum chemistry are used to rule out systemic conditions like infection, inflammation and malignancy. Imaging of brain includes non-contrast MRI, MRA, 3-dimensional computed tomography and angiography. First line treatment for GN is pharmacotherapy. Medications of choice are carbamazepine, gabapentin, pregabalin or any other membrane stabilizer. Low dose of SSRI and vitamin B12 can be used. Before initiation of carbamazepine therapy, baseline complete blood count, blood chemistry and urinalysis are obtained. Gabapentin is a reasonable alternative for GN. NSAIDs are not routinely recommended for treating neuralgia [5].

Treatment choice for most of GN case is non-surgical pharmacotherapy. But the failure of pharmacotherapy treatment, the physician opts for surgery [6]. In our case, the patient was presented with acute onset of pain in the right half of face, which aggravated on opening mouth. She is a known case of DM, and was treated with oral hypoglycemic agents, oxcarbazepine, anti-anxiety and anti-hypertensive drugs. Following therapy patient experienced pain relief and was discharged with medication. She was advised for regular medical checkup.

CONCLUSION

GN is a rare condition associated with hyperactivity of glossopharyngeal nerve. GN is uncommon compared with TN. The disease is diagnosed using radiographic imaging studies such as CT and MRI. Carbamazepine is the first line agent for treatment.

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Abbreviations

GN – Glossopharyngeal Neuralgia
 TN – Trigeminal Neuralgia
 NSAID- Non-steroidal Anti-inflammatory drug
 SSRI – Selective Serotonin Reuptake Inhibitor
 MRI – Magnetic Resonance Imaging
 CT – Computed Tomography
 DM - Diabetes Mellitus
 CAD - Coronary Artery Disease
 PNS - Peripheral Nervous System
 ESR - Erythrocyte Sedimentation Rate
 MRA - Magnetic Resonance Angiography
 MDCT - Multidetector Computed Tomography
 TMJ - Temporomandibular Joint Syndrome

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