

# Paroxysmal Throbbing Pain Precipitated by Swallowing, Followed by Syncope, are Fatal Processes of Glossopharyngeal Neuralgia

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## Abstract

Glossopharyngeal neuralgia is not a simple disease with just sensory neurodynia, which could be followed by fatal cardiac syncope. We report a rare case, female, 46-year-old, married, paroxysmal throbbing pain in right auricle for 5 year, followed by syncope for 10 days. The patient fell down unconsciously, during cardiac syncope. ECG shows abnormal cardiac rhythm, low heart rate, followed by blood pressure. According to the condition, artificial pacemaker was applied to the patient, and Microvascular Decompression (MVD) is needed.

**Keywords:** Case report; Glossopharyngeal neuralgia; Microvascular decompression; Syncope; Vaguglossopharyngeal neuralgia.

## Introduction

Glossopharyngeal neuralgia is not a simple disease with just afferent problem, which could be followed by fatal cardiac syncope [1-4]. A lady, 46-year-old, married, paroxysmal throbbing pain in right auricle for 5 year, followed by syncope for 10 days, was admitted to the Department of Neurology, Zhenjiang Fourth People's Hospital.

The patient suffered from pharyngalgia, and followed by otalgia for five years, and then she developed shooting pains in right auricle elicited by swallowing, followed by syncope for 10 days. Every attacks lasted about 2 to 3 minutes before the pain subsided. Five years ago, she was diagnosed with glossopharyngeal neuralgia in the Affiliated Hospital of Jiangsu University and received carbamazepine every day, and the drug could control the onset of pain. She suffered from right throbbing otalgia every year during January to March, and did not subject during the rest of the year. Twenty days ago, the patient suffered a severe onset of right throbbing otalgia and severe dizziness, fell unconscious and syncope every half hour. She was sent to our hospital to consult. She was diagnosed with neurodynia and syncope [5] (Table 1).

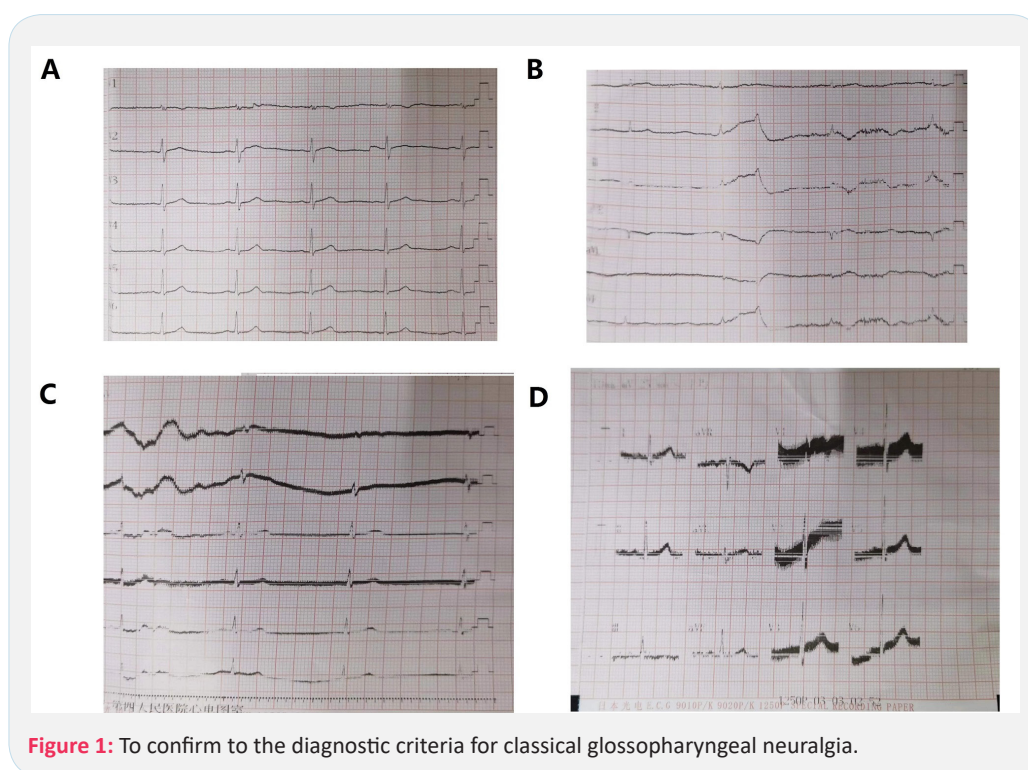
During the patient's hospitalization, the patient suffer otalgia in the right auricle, with 2 episodes of falling down unconsciousness, foaming at the mouth, closed eyes, and closed teeth. At that time, the pupils on both sides were dilated, with a diameter of 4 mm and delayed light reflex. The blood pressure was 84/46 mmHg, and the heart rate was about 45/minute, lasting for about 30 seconds. After the consciousness recover, the blood pressure increased to 111/70 mmHg, and the heart rate increased to about 77/minute. According to bedside electrocardiogram monitoring, the patient's heart rate and blood pressure decrease every time they experience otalgia in right auricle. After the right auricle pain improves, their heart rate and blood pressure can rise (Figure 1). ECG shows abnormal cardiac rhythm, low heart rate, followed by blood pressure [6].

The glossopharyngeal nerve is different from trigeminal nerve, which has Special Visceral Afferent fibers (SVA): Sensory nerve to carotid sinus, a baroreceptor, and can cause reflexion to suppress the cardiovascular movements. The mechanism of the syncope is believed has close relation with the carotid sinus reflexion, which decreases the blood pressure and heart rate, even abnormal cardiac rhythm and syncope. According to the condition, artificial pacemaker was applied to the patient, and Microvascular Decompression (MVD) is needed.

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**Table 1:** To confirm to the diagnostic criteria for classical glossopharyngeal neuralgia.

Diagnostic criteria	This case	Confirm
A. Paroxysmal attacks of facial pain lasting from a fraction of a second to 2 min and fulfilling criteria	Paroxysmal attacks of otalgia lasting 2-3 min	Yes
B. Pain has all of the following characteristics:		
1 Unilateral location	Only in right side	Yes
2 Distribution within the posterior part of the tongue, tonsillar fossa, pharynx or beneath the angle of the lower jaw and/or in the ear	Distribution in pharynx and auricle	Yes
3 Sharp, stabbing and severe	Stabbing or shooting pain	Yes
4 Precipitated by swallowing, chewing, talking, coughing and/or yawning	Induced by swallowing	Yes
C. Attacks are stereotyped in the individual patient	Concurrency are regular	Yes
D. There is no clinically evident neurological deficit	No abnormal finding in nervous system.	Yes
E. Not attributed to another disorder	Not related attributed finds	Yes



**Figure 1:** To confirm to the diagnostic criteria for classical glossopharyngeal neuralgia.

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