Description of a Rare Neurapraxia

The Unknown but Benign Tapia Syndrome

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Abstract

Tapia syndrome is a rare and unknown entity characterized by unilateral paralysis of the hypoglossal and recurrent laryngeal nerves. We report the case of a 56-year-old woman who underwent rhinoplasty with endotracheal intubation. Immediately after surgery, she showed dysphonia and difficulty chewing. Physical examination revealed a left-sided weakness of the tongue muscles and unilateral vocal cord and arytenoid paresis. Magnetic resonance imaging of the brain was normal. The diagnosis of Tapia syndrome was withheld, and the patient evolved favorably with physiotherapy exercises.

Keywords: Tapia Syndrome; Endotracheal intubation; Neurapraxia; Laryngeal recurrent nerve; Hypoglossal nerve

Introduction

Tapia syndrome is a rare complication of airway manipulation with an over-100-years-old history [1]. The syndrome is characterized by unilateral paralysis of the tongue and vocal cords, manifesting as dysphonia, tongue deviation, and dysphagia. This syndrome results from simultaneous unilateral paralysis of the hypoglossal nerve and the recurrent laryngeal branch of the vagus nerve, either due to intracranial or extracranial injury. Orotracheal intubation is the main risk factor [2, 3].

Case Presentation

We describe the case of a 56-year-old woman who was admitted to the maxillofacial surgery service for cosmetic rhinoplasty with orotracheal intubation. She had no medical or surgical history. The preoperative routine investigations were unremarkable. In the immediate postoperative period, she noticed an unpleasant hoarseness, which she described as a man's voice. At the time of the first meal, she noticed that the food bolus stagnated in the left part of the oral cavity, as if she could not mobilize it with her tongue. At the same time, she had a slight cough when swallowing. She denied motor or sensory complaints regarding the limbs or face. On the second postoperative day, due to the persistence of complaints, in-hospital collaboration with the neurology team was requested. The patient was stressed, but the postoperative complaints did not worsen. A physical examination did not reveal any facial or extremity paresis, with intact pain and vibratory sensitivity. Examination of the cranial nerves revealed marked dysphonia and left deviation of the tongue on protrusion (fig. 1). The patient was practically unable to touch her right cheek with her tongue and

showed a marked asymmetry. The patient underwent magnetic resonance imaging (MRI) of the brain, which was normal. We requested the collaboration of the otolaryngology team, and a flexible laryngoscopy was performed, which confirmed a left vocal cord paresis (fig. 2). Tapia syndrome was assumed. The patient was reassured and discharged. She benefited from voice therapy and made a good recovery after six months.

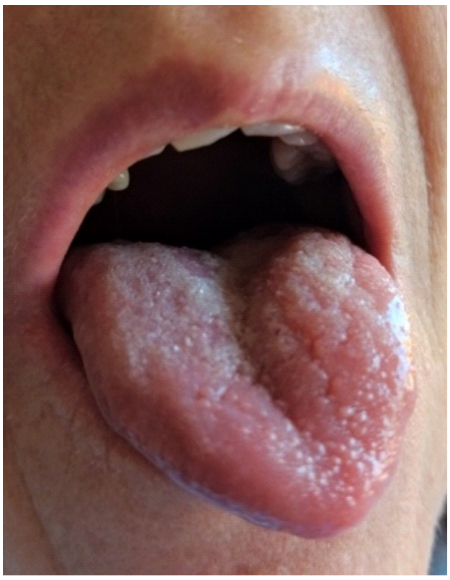

Figure 1: Left deviation of the tongue on protrusion.

Discussion

Our patient had a rare but benign syndrome. It is a neuropraxia lesion of the recurrent laryngeal branch of the vagus nerve and the hypoglossal nerve in association with orotracheal intubation and cervical hyperextension. It is thought to be induced by direct pressure on the nerves [2]. Both nerves pass through the junction of the oropharynx and the hypopharynx in their course, an area particularly vulnerable to trauma during the protection of the airways [3].

Symptoms appeared immediately upon awakening, as described in previous cases. A detailed clinical examination is essential to exclude a central cause and simultaneous paresis of other cranial nerves. An MRI is helpful to exclude a central lesion. However, the diagnosis is a clinical one made in an appropriate clinical context with the aid of laryngoscopy. Electromyography and barium swallow can be used to complement the examination. Treatment is mostly conservative, with most patients showing some degree of recovery. A multidisciplinary approach is fundamental to the diagnosis and treatment of this rare entity.

Patient's Perspective

I felt that my symptoms were undervalued after the surgery. On the second day, I was sure something was wrong. Understanding the mechanism of the disease and being reassured about its prognosis helped me overcome the situation and join the speech therapy program. I am grateful to the medical team and the rehabilitation team for being able to recover my voice.

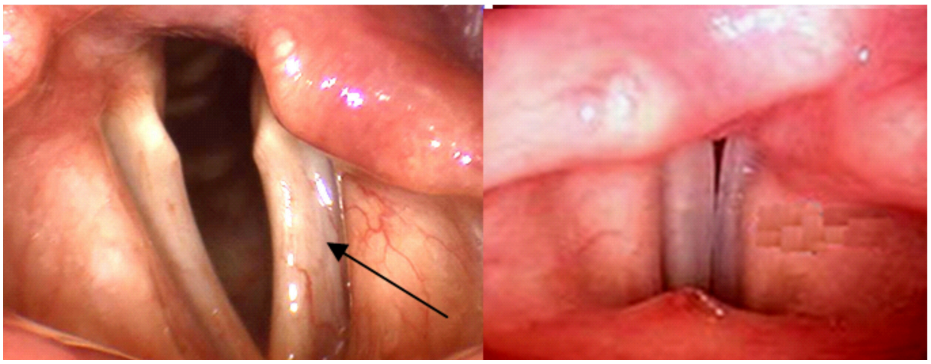

Figure 2: In open position (left), the left vocal cord (arrow) does not abduct and stays in the midline. In closed position (right), there is no complete contact between the counterparts.

Conclusion

With this case, we want to draw attention to this benign syndrome that has a significant impact on the patient and is unknown to many doctors. We highlight the importance of reassuring the patient. With fewer than 200 cases described in the literature, this is an old syndrome with a generally favorable prognosis in most cases.

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Ethics Statement

Written informed consent was obtained.

Conflict of Interest Statement

The authors have no potential conflict of interest to declare.

Author Contributions

GA conceived the idea; AM drafted the article in consultation with MF and GA. CM made corrections and was responsible for communicating with the patient and obtaining consent. MF and GA critically revised the article after input from the other authors.

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