

Aspiration-Related Emergency Tracheotomy In A Parkinsonian Patient: Case Report

Taliye Cakabay

Kanuni Sultan Süleyman Training and Research Hospital, ENT, Istanbul, Turkey

Taliye Cakabay

ABSTRACT

Emergency tracheotomy should be performed as soon as possible to avoid irreversible damage to the hypoxic brain. Once a safe airway is established, the underlying causes can be investigated and current treatments for etiology can be planned. Foreign bodies, infections, traumas leading to upper airway obstruction are among these etiologies. In this case report, we also presented a parkinsonian patient with an emergency tracheotomy, who developed laryngeal foreign body aspiration, respiratory arrest during feeding after swallowing disorder.

Keywords: Tracheotomy, foreign body aspiration, Parkinson's disease

PARKİNSON HASTASINDA ASPİRASYONA BAĞLI ACİL TRAKEOTOMİ: OLGU SUNUMU

ÖZET

Hipoksiye bağlı beyinin geri dönüşümsüz hasarının önüne geçebilmek için gerektiğinde acil trakeotomi mümkün olan en kısa sürede açılmalıdır. Güvenli hava yolu sağlandıktan sonra altta yatan sebepler araştırılıp, mevcut etyolojiye yönelik tedaviler planlanabilir. Bu etyolojiler arasında üst hava yolu obstrüksiyonuna sebep olan yabancı cisimler, enfeksiyonlar, travmalar önde gelmektedir. Bu olgu sunumunda da, yutma bozukluğu gelişmesi sonrası, beslenme sırasında larenks yabancı cisim aspirasyonu sonucu solunum durması gelişen, acil trakeotomi açılan bir parkinson hastası sunuldu.

Anahtar sözcükler: Trakeotomi, yabancı cisim aspirasyonu, Parkinson hastalığı

Emergency intervention to the airway is one of the most important interventions in the otolaryngology practice. Emergency tracheotomy as the first-line intervention is a life-saving surgical procedure. Tracheotomy is a surgical procedure for opening a window on the anterior wall of the trachea to create a sufficient airway (1, 2). Indications for emergency tracheotomy include sudden and rapid-developing upper airway obstructions, foreign bodies, and traumas (1, 2). Herein, we present a case of Parkinson's disease (PD) in whom respiratory arrest due to aspiration of a foreign body into the larynx developed and who underwent emergency tracheotomy due to the intubation failure.

Case Report

A 62-year-old male patient was admitted to the emergency department with respiratory distress. The patient was being treated for PD for five years. He experienced severe respiratory distress in the emergency department; however, attempts to

Correspondence:

Taliye Cakabay
Kanuni Sultan Süleyman Training and Research Hospital, ENT, Istanbul, Turkey
E-mail: cakabaytaliye@yahoo.com

Received : March 13, 2019
Revised : June 21, 2019
Accepted : June 21, 2019

intubate the patient failed due to a foreign body (a meaty bone piece stuck in the larynx, covering the entire rima glottidis). A consultation was requested for an emergency tracheotomy. The patient was unconscious and suffered from respiratory arrest. An emergency tracheotomy was performed while the patient was on a stretcher, and a safe airway was established. Then, the foreign body that was stuck within the vocal cords in the larynx was removed carefully without causing damage to the larynx. The patient became conscious, had spontaneous breathing, and was admitted to the ward for follow-up. No postoperative complications were observed and he became stabilized after two days of follow-up. No pathologies were observed during the endoscopic examination of the larynx, and the tracheotomy was closed. The patient was discharged following the consultation of the Department of Neurology.

Discussion

Parkinson's disease is a progressive disease with an insidious onset, which causes degeneration in cortical and subcortical neurons (3). Resting tremor, rigidity, akinesia, bradykinesia, or abnormal posture are among the typical symptoms of this disease (3). Some patients may experience a prodromal period with nonspecific symptoms. Fatigue and personality changes are the first motor symptoms (3). During the examination, resting tremors involving one or more fingers under mental stress, reduced arm swing on one side during walking (i.e., arm swing asymmetry) or the emergence of concurrent tremors in hands are auxiliary symptoms for diagnosis (3).

During the early stages of PD, 80% of patients experience dysphagia, and the incidence can increase up to 95% in the advanced stages (4). Dysphagia has a detrimental effect on the quality of life in patients with PD. In addition, it causes lung infections, weight loss, and deterioration of overall status (5). In our case, a foreign body was stuck in the larynx due to swallowing dysfunction and caused the respiratory arrest. This condition may be critical to emphasize

the importance of evaluating swallowing function during follow-up of patients with PD, and to remind them of the key points in their diets, particularly having bites which are small and easy to swallow. Otherwise, aspiration-related sudden airway obstruction may occur or pneumonia-related mortality can be observed in the long term. Aspiration pneumonia is one of the leading causes of PD-related mortality (5). In particular, oropharyngeal swallowing problems are commonly seen in PD. In oral control disorder, swallowing starts before the completion of the oral stage. Saliva control disorder and aspiration represent the two most important indicators of swallowing disorder in PD (3–7).

Evidence from videofluoroscopic and manometric studies indicate that approximately 50% of patients with PD have subclinical oropharyngeal dysfunction (6). These patients have intact corticobulbar fibers; however, triggering of swallowing reflex is deteriorated. In other words, there is a defect during the return from voluntary contractions to pharyngeal swallow reflex (6). The pharyngeal period of swallowing is abnormally prolonged in PD. Hypokinesia and rigidity in pharyngolaryngeal muscles may cause this slowdown. Another swallowing disorder in PD is the decrease in automatic swallowing rhythm. This resembles other autonomic movements – such as the reduction in spontaneous blinking (6). The decrease in automatic swallowing rhythm causes accumulation of saliva in the mouth, and drooling. L-dopamine treatment is known to have positive effects due to its effect on the oropharyngeal stage of swallowing (7). Swallowing dysfunction can result in aspiration in patients with PD, and lead to a life-threatening risk. This should be taken into consideration for the follow-up and treatment of patients.

In conclusion, tracheotomy is a life-saving procedure in case of foreign body aspirations accompanied by loss of consciousness, particularly, when the foreign body is located in the larynx. Performing tracheotomy in a rapid fashion is of vital importance in this type of upper airway obstructions.

References

1. Altman KW, Waltonen JD, Kern RC. Urgent surgical airway intervention: a 3-year county hospital experience. *Laryngoscope* 2005;115:2101–4. [\[CrossRef\]](#)
2. Fang CH, Friedman R, White PE, Mady LJ, Kalyoussef E. Emergent Awake tracheostomy --The five-year experience at an urban tertiary care center. *Laryngoscope* 2015;125:2476–9. [\[CrossRef\]](#)
3. Samii A, Nutt JG, Ransom BR. Parkinson's disease. *Lancet* 2004;363:1783–93. [\[CrossRef\]](#)
4. Nagaya M, Kachi T, Yamada T, Igata A. Videofluorographic study of swallowing in Parkinson's disease. *Dysphagia* 1998;13:95–100. [\[CrossRef\]](#)
5. Troche MS, Sapienza CM, Rosenbek JC. Effects of bolus consistency on timing and safety of swallow in patients with Parkinson's disease. *Dysphagia* 2008;23:26–32. [\[CrossRef\]](#)
6. Wintzen AR, Badrising VA, Raymond ACR, Vielvoye J, Liauw L, Pauwels EKJ. Dysphagia in ambulant patients with Parkinson's disease: common, not dangerous. *Can J Neurol Sci* 1994;21:53–6. [\[CrossRef\]](#)
7. Fonda D, Schwarz J, Clinnick S. Parkinsonian medication one hour before meals improves symptomatic swallowing: a case study. *Dysphagia* 1995;10:165–6. [\[CrossRef\]](#)