Food Choking in a Patient with Congenital Temporomandibular Joint Ankylosis

Konjenital Temporamandibuler Eklem Ankilozu Olan Bir Hastada Yiyecekle Boğulma

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Dear Editor,

A 2-year-old girl had a choking incident while eating at home. Although bystander cardiopulmonary resuscitation (CPR) was performed by her parents, she went into cardiopulmonary arrest by the time the emergency medical team arrived. During subsequent CPR, the emergency physician realised the impossibility of manipulating the tracheal intubation devices because of trismus. One hour after the incident, circulation spontaneously returned on the way to the hospital. According to the medical history of the patient, she was previously diagnosed with congenital temporomandibular joint ankylosis (CTMJA). Because severe trismus was observed at birth, nasogastric tube feeding was initiated and continued until 18 months of age, and oral ingestion of milk and masticated food was initiated at 12 months of age. Despite several examinations, including a chromosomal study, the disease that caused CTMJA remained unknown.

After the patient arrived at the hospital, critical care physicians attempted endotracheal intubation using the GlideScope AVL #2 (with single-use blade GVL 2 STAT; Verathon Inc., WA, USA). The inter-incisal opening decreased (<15 mm). A food bolus measuring 2 cm in diameter, i.e. a piece of fish sausage, was observed in the mouth cavity and was removed using Magill forceps. An endotracheal tube with an internal diameter of 4.5 mm was successfully placed. Consequent head and neck computed tomography revealed hypoxic–ischaemic encephalopathy and fatty degeneration of masticatory muscles. No temporomandibular joint bone malformation was observed (Figure 1). Mechanical ventilation was initiated at our intensive care unit; however, oxygenation in the patient worsened owing to aspiration pneumonia. The patient also had aggravation of a cerebral oedema and died 8 days after admission.

Congenital temporomandibular joint ankylosis is a rare disease (1). A congenital sucking and eating disorder is observed because of a limitation in mouth opening (1). There is concern that CTMJA causes airway obstruction (2). However, no other studies have reported regarding food choking in a patient with CTMJA. The mainstay treatment of CTMJA is temporomandibular joint reconstruction via surgery (3, 4).

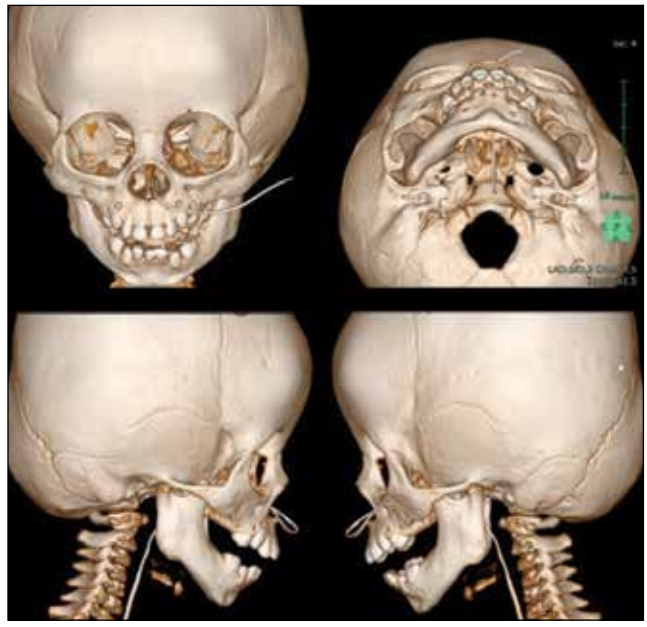

Figure 1. Three-dimensional reconstructed CT of our patient. Frontal, base and bilateral views of the skull showing any interference between the coronoid and bone wall of the zygomatic arch or other bony interferences

In our case, surgical treatment was not recommended owing to normal bone structure. Too large-sized food and incomplete mastication might lead to choking in patients with untreated CTMJA. Furthermore, limited mouth opening makes controlling the airway difficult and could adversely affect a patient's prognosis.

A GlideScope is a video laryngoscope that provides complete visualisation of the airway and facilitates direct removal of the obstructing foreign body (5). The thickness of the single-use blade for the GlideScope AVL #2 is 8.6 mm, enabling the oral insertion of the GlideScope to detect the obstructing material, although mouth opening was limited. The GlideScope might be useful for managing the airway when physicians encounter obstructions in the upper airway of paediatric patients with unexpected trismus such as CTMJA.

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