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CASE STUDY

Nasogastric tube syndrome: a case report

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KEYWORDS
Nasogastric tube syndrome;
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Abstract
Nasogastric tube syndrome (NTS) is an uncommon complication of an indwelling nasogastric tube. Ulceration and infection in the posterior cricoid region causes dysfunction in the abduction of the vocal cords and may seriously compromise patients' airways. This pathology should be considered in patients with prolonged nasogastric intubation who start with moderate pharyngeal pain.
We report a case of a 70 year-old woman, admitted to the Neurology department of our centre due to an ischaemic cerebral accident who presented acute dyspnoea requiring emergency tracheotomy following prolonged nasogastric intubation.
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PALABRAS CLAVE
Síndrome de sonda nasogástrica;
Parálisis laríngea;
Músculo cricoaritenoideo posterior

Síndrome de sonda nasogástrica: a propósito de un caso

Resumen
El síndrome de la sonda nasogástrica (NTS) es una complicación infrecuente del sondaje nasogástrico que por ulceración e infección postcricoidea provoca una disfunción en la abducción de las cuerdas vocales que puede comprometer la vía aérea. Debemos pensar en esta patología en todo paciente con sondaje nasogástrico prolongado que comience con dolor faríngeo de moderada intensidad.
Presentamos el caso de una mujer de 70 años ingresada en el Servicio de Neurología de nuestro hospital por un accidente isquémico cerebral que, tras un sondaje nasogástrico prolongado, presenta un cuadro agudo de disnea que requirió traqueotomía de urgencia.
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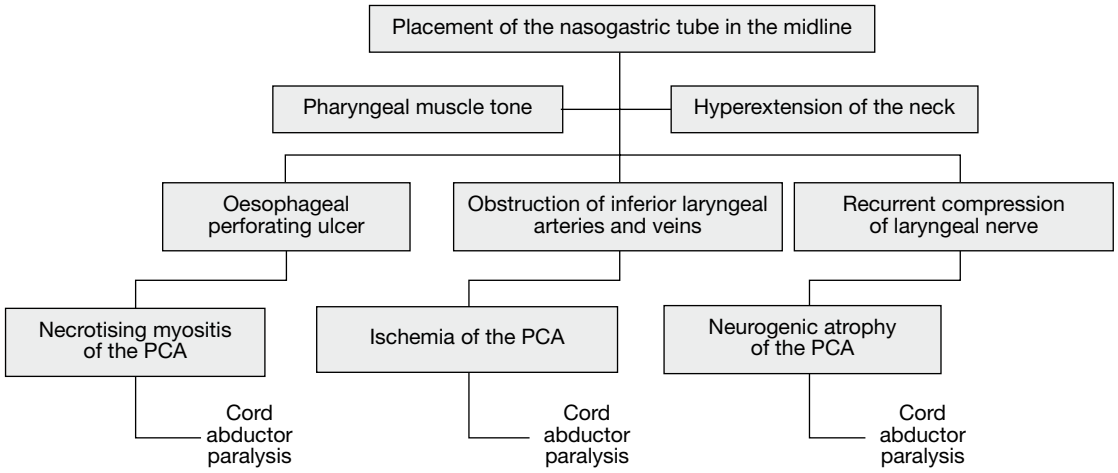

Figure Hypothesis of the pathophysiological mechanism for the nasogastric tube syndrome according to Isozaki et al. in 2005. PCA: posterior cricoarytenoid muscle.

Introduction

Nasogastric tube syndrome (NTS) is a laryngeal paralysis in abduction caused by an infection of the posterior cricoarytenoid muscle, responsible for the dilation of the glottis.[1] In 1981, Friedman et al.[2] published a pilot study on animals (dogs) about the impact produced by the probe according to its position on the posterior region of the larynx. They concluded that the position in the midline was the most harmful. It was not until 1990 that Sofferman[1] described NTS syndrome, defining the clinical triad of presence of a nasogastric tube; pharyngeal pain and stridor; and vocal cord paralysis in abduction.

Case study

Diabetic woman aged 70 years, with advanced Parkinson's disease, hiatal hernia, gastric ulcer and reflux oesophagitis who was admitted for acute ischaemic stroke of the middle cerebral artery. Dysphagia forced the placing of a nasogastric tube for enteral feeding. After 5 weeks of admission and after 24 h of a change of probe, a laryngeal stridor began. A nasofibrolaryngoscopic examination showed a bilateral vocal cord paralysis in abduction and arytenoid oedema requiring emergency tracheotomy. The probe was removed and parenteral alimentation introduced. The mobility of the cords recovered gradually, becoming normal 20 days after the tracheotomy, with the tracheostoma closed.

Discussion

NTS is a rare but potentially fatal complication of nasogastric intubation. In all the medical literature, there are a total of 33 cases. However, due to the ignorance of this disease, it is believed that there are fewer reported cases than actually exist.

Three hypotheses have been described about the pathophysiological mechanism of this entity: one of vascular origin, another with muscular origin and a third with neurogenic origin[4] (Figure). The most common nasofibrolaryngoscopic finding[3] in all published cases has been, in addition to the required bilateral vocal cord paralysis, an ulceration of the posterior cricoid region in half of the cases. The recovery time for cord mobility has been estimated as between 1 day to 2 months after the tracheotomy.

With regard to treatment,[3] parenteral corticosteroids should be used to reduce inflammation and antibiotics[2] to prevent the formation of retrocricoid abscesses. The probe should be removed as soon as possible and another type of feeding should be started: parenteral, gastrostomy, etc. Tracheotomy is preferable versus prolonged endotracheal intubation, as this may delay the recovery of vocal cord function by several months.

Eventually, all patients recover vocal cord function. Therefore, as this is a pathology that evolves very favourably when treated adequately, early diagnosis and rapid implementation of the appropriate treatment to ensure the airway and remove the cause of the problem (the nasogastric tube) is imperative.

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