Enfisema cervical postamigdalectomía

Cervical emphysema after tonsillectomy

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RESUMEN

La amigdalectomía, una de las cirugías más frecuentemente realizadas en otorrinolaringología, es un procedimiento quirúrgico relativamente seguro. Sin embargo, numerosas complicaciones han sido descritas. Presentamos el caso de una paciente adulta con enfisema cervical tras ser sometida a amigdalectomía, una complicación poco frecuente.. Una disección más profunda crea una solución de continuidad que diseca los planos cervicales, pudiendo alcanzar el mediastino y producir un neumotórax. Las maniobras que aumentan la presión en la vía aérea superior favorecen el paso de aire y el aumento del enfisema.

Palabras clave: complicaciones cervicales, enfisema, amigdalectomía.

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ABSTRACT

Tonsillectomy, one of the most frequently surgery performed in otolaryngology, is a relatively safe surgical procedure. However, several complications have been described. We report a case of an adult patient with cervical emphysema after undergoing tonsillectomy, a rare complication. A deeper dissection creates a discontinuity that dissects the cervical planes and allows the air to reach the mediastinum and may cause a pneumothorax. Manoeuvres that increase the air pressure on the upper airway favour and increase the emphysema.

Keywords: cervical complications, emphysema, tonsillectomy.

INTRODUCTION

Several complications can be related to head and neck surgery. Among these, there are subcutaneous emphysema, pneumothorax and pneumomediastinum. Subcutaneous emphysema has been described as a rare complication following facial trauma, dental extraction, tonsillectomy, adenoidectomy, and sinus surgery[1]. A deeper dissection than normal creates a discontinuity that dissects the cervical planes. Manoeuvres that increase the upper airway pressure (manual ventilation, vomiting, coughing, etc.) increase the emphysema. The purpose of this study is to analyse the mechanism, morbidity, treatment and prevention of this condition.

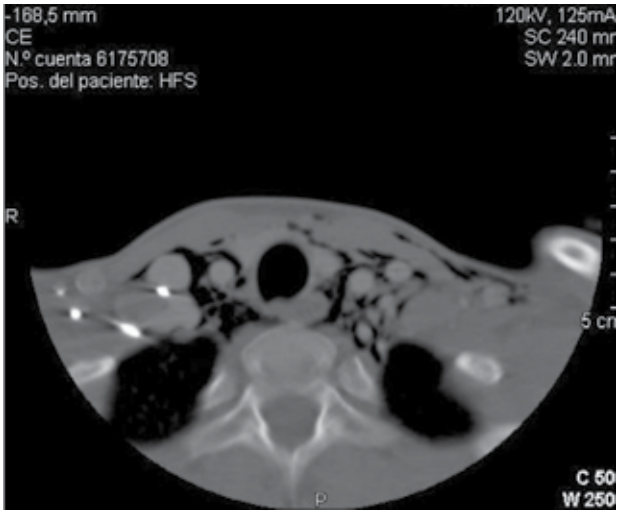
CLINICAL CASE

A 20-year-old woman was admitted to the Otolaryngology Department to undergo tonsillectomy for presenting recurrent tonsillitis. Preoperative tests and personal history showed no relevant medical history. Tonsillectomy was performed with electrocautery under general anaesthesia and tracheal intubation. Without evidence of early postoperative complications, she was discharged eight hours later.

On the fourth postoperative day, she went to the Emergency Service, presenting a three-day hemifacial swelling, with laterocervical and inframandibular crepitus. The skin showed no discoloration, there was no clinical or analytical data of respiratory failure, and vital sings were normal. Chest and neck radiographies

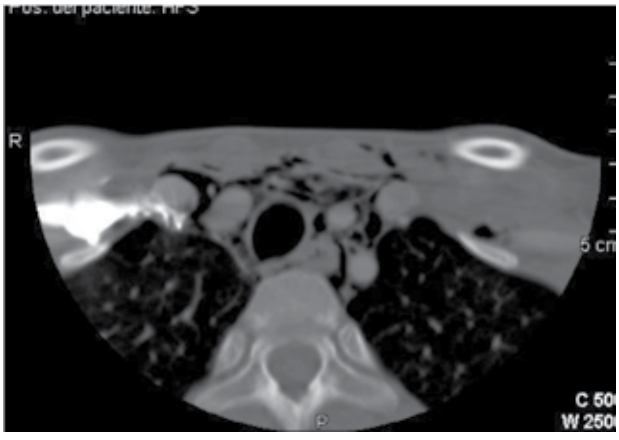
were performed, showing air in the left cervical soft tissue; chest radiography showed no sing of pneumomediatinum or pneumothorax. Finally, a CT scan revealed postoperative sings in the bed of the palatine tonsils, with multiples gas images dissecting the soft tissues of the entire left side of face and neck.

FIGURA 1
CT scan image showing multiple gas images



The diagnosis was subcutaneous emphysema secondary to tonsillectomy. She was readmitted to hospital and observed for the newt six days, with prophylactic antibiotics. No cardiopulmonary changes were observed and subcutaneous emphysema was progressively resolved. After hospital discharge, there was a one-month ambulatory follow-up, with good clinical evolution.

FIGURA 2
CT scan image showing gas images reaching the upper mediastinum



DISCUSSION

Despite its frequency, tonsillectomy and adenoidectomy are rarely accompanied by perioperative complications. Postoperative bleeding, dehydration and anaesthetic risks include the most common sources of morbidity. These surgeries are relatively safe[2]. Life threating situation are, however, extremely rare and, when they occur, are often associated with comorbidities.

Tonsillectomy and adenoidectomy complications often resolve without needing a second surgery, they are easy to treat and it is very difficult to result in long-term sequelae[3].

The presence of free air in the soft tissues of the body is called emphysema. Cervical, facial or mediastinal emphysema has been attributed to cervicofacial traumatic injury, tooth extraction, oropharyngeal and oesophageal lesions, and even spontaneous. The onset is attributed to the presence of a discontinuity in the mucosa during a moment when the pressure of the upper airway is increased; in our case it might be due to a deeper dissection of the plane of the superior pharyngeal constrictor muscle. Once there is continuity, cervicofacial air can travel freely along the fasciae planes and reach even the mediastinum. The airflow is favoured by manoeuvres that increase the air pressure in the upper airway, as may occur with coughing, vomiting or manual ventilation after extubation[4].

Although the evolution of subcutaneous emphysema is usually self-limited and benign, a strict observation of cardiopulmonary function and progression of emphysema is critical. Massive subcutaneous emphysema may compress the trachea; a pneumothorax may impair respiratory function; a tension pneumomediastinum may compress the heart and decrease the cardiac output[5].

Neck and chest radiographs should be requested. The performance of a CT scan is not strictly necessary, although it is very useful to confirm the diagnosis and to establish the extent of the tissue involvement[6].

Broad-spectrum antibiotic is indicated to prevent the growth of the bacterial flora of the oral cavity in the soft tissues of the neck[5,7]. Activities increasing upper airway pressure (vomiting, coughing, physical effort) should be avoid.

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