CASE STUDY

Interarytenoid Osseous Bridge After Prolonged Endotracheal Intubation

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KEYWORDS
Interarytenoid osseous bridge; Tracheal intubation; Complications

Abstract Posterior glottic stenosis or interarytenoid fibrous adhesion is uncommon and has sometimes been misdiagnosed as cord paralysis. Laryngoscopy and laryngeal electromyography studies are the two main diagnostic aids. We present the case of a 63-year-old man under endotracheal intubation during 10 days after a cardiac procedure, who was evaluated in our department for persistent dysphonia. The laryngoscopy showed a granuloma-like lesion in the posterior glottic space. During the microlaryngoscopy procedure, the osseous consistency of the interarytenoid lesion was observed. Laser surgery excision of the lesion was performed with good results. According to our review of the literature, this corresponds to the second case reported.

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PALABRAS CLAVE
Puente óseo interaritenoideo; Intubación endotraqueal; Complicaciones

Resumen La estenosis glótica posterior por fijación interaritenoidea es muy poco común, y a veces se diagnostica como parálisis de las cuerdas. La laringoscopía y electromiografía laringea son los métodos diagnósticos principales. Presentamos un paciente varón de 63 años, que estuvo intubado 10 días después de un procedimiento cardíaco. Se valoró en nuestra consulta por disfonía. La endolaringoscopía mostró un granuloma en el espacio glótico posterior. Posteriormente se realizó una excisión láser con buenos resultados a largo plazo. Según nuestra revisión este caso sería el segundo reportado en la literatura.

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Introduction

Dysphonia following tracheal intubation has been reported in 14%-50% of patients subjected to general anaesthesia. In most cases, the symptoms are temporary and improve in a few days. The incidence of glottal stenosis following laryngeal–tracheal intubation varies from 4% to 14%.


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Patients

The laryngeal endoscopy showed a granuloma in the posterior glottal space.

Figure 1

Figure 2

Microlaryngoscopy enabled us to note the bony consistency of the interarytenoid lesion.

Figure 3

Image following resection of the lesion with laser surgery.

Laser surgery was indicated for resection of the lesion (Fig. 3).

Discussion

Laryngeal granulomas are the most common complications following endotracheal intubation in adults. Patients who have been intubated for fewer than 24h are more likely to have lesions in the anterior glottis or paralysis of a vocal cord. Stenosis of the posterior glottis with arytenoid fixation is a very infrequent complication. Although the aetiology varies, the most common cause is prolonged intubation. Patients with this problem are dependent on tracheotomy and phonation is compromised.

An interarytenoid osseous bridge is an extremely rare lesion often confused with bilateral paralysis of the vocal cords. The mechanism creating this lesion depends on the time elapsed. Ulceration of the perichondrium begins in the first 24h following endotracheal intubation. After 96h, the ischaemia causes necrosis that leads to the formation of a granuloma. During the process of remodelling and repair of the anatomical structures, a fibrous formation establishing a bridge between the arytenoids is defined.

Laryngoscopy with a careful examination of the posterior glottis and/or a laryngeal electromyography are the two main methods for clinical diagnosis helping to establish an accurate diagnosis. In posterior glottal stenosis, laser surgery is generally the treatment offering good results.

According to our review of the literature, this would be the second case of its type reported.

Conflict of Interest

The authors have no conflict of interests to declare.

References