



LETTER TO THE EDITOR

Bilateral Large Postintubation Vocal Granulomas



Jackson¹ reported a nonspecific granuloma of the larynx as “contact ulcer of the larynx” in 1928. Vocal granuloma is a non-neoplastic lesion that most often develops in the vicinity of the posterior vocal cords, adjacent to the vocal process. It may be an ulcerated region of the cord, or may manifest as a nodular polypoid lesion.^{2,3} The etiology of laryngeal granuloma varies. Inappropriate vocal use, habitual coughing, gastroesophageal reflux, and endotracheal intubation are well-known causes. This lesion may be mistaken on clinical or pathologic grounds for carcinoma, although thorough microscopic examination usually permits a correct diagnosis. However, its therapeutic strategy is still controversial. In general, therapeutic strategy consists of medication such as steroids, in addition to vocal hygiene and/or surgery. Recurrence after excision commonly occurs if the underlying causative factors have not been appropriately managed and may re-establish the chronic inflammatory process. Here, we report an unusual case of a patient with bilateral large postintubation vocal granulomas.

A 53-year-old female patient who was suffering from stomach adenocarcinoma underwent total gastrectomy about 6 months ago. Endotracheal intubation with a No. 7 tube was applied for general anesthesia as per our routine procedure and the whole process was completed uneventfully. The smooth postsurgery course lasted for around 1 month until she complained of a husky voice. Maximum phonation time was 3 seconds. Also, aspiration when drinking water apparently often happened. She visited a local otolaryngologist and was told that it appeared to be bilateral vocal polyps. She was referred to our outpatient clinic and underwent laryngeal microsurgery. Pathology diagnosis revealed bilateral large vocal postintubation granulomas, about 6 mm × 7 mm each in size (Figure 1). Under microscope, we observed an ulcer symptom with fibrinoid necrotic debris and granulation tissue formation at the ulcer site (Figure 2). Focal old hemorrhage infiltrated with hemosiderin-laden macrophages and reactive squamous epithelial hyperplasias were seen. The postoperative course was uneventful. Maximum phonation time was 14 seconds 6 months after the surgery. Both the husky voice and apparent aspiration phenomenon were subsided after surgery.

Many possible causes can be involved in the development of postsurgery husky voice. One is vocal granuloma postintubation, which is an exophytic inflammatory mass, usually appearing on the vocal process of the arytenoid cartilage. The etiologies of developing vocal granuloma include vocal abuse, gastroesophageal reflux, and endotracheal intubation. Although contact vocal granuloma developing from contact ulcers is a well-known entity, it is not commonly seen in postintubation, with an incidence around 1/10,000, and is usually smaller than 5 mm in diameter.⁴ Assault to the right side is seen much more often than to the left side.

Bilateral postintubation granulomas do happen occasionally. Despite its low occurrence, vocal granuloma has attracted considerable attention from physicians as we learned from the literature, probably because of its versatile clinical management. Each different medical treatment including antireflux therapy can cure the disease with the vocal function restored. The recurrence rate after surgical excision is debatable.^{2,5} Multiple surgical excisions and a variety of combined medical regimens have been used to treat granulomas with variable success. However, conservative therapy has been given a priority,^{2,6} because the recurrence rate after surgical removal is high. Having the husky voice and aspiration phenomenon, our patient received the surgery as the first option.

Despite its name, vocal process granuloma is not a true granulomatous process in a pathologic sense, but is a reactive and reparative process, in which an intact or ulcerated squamous epithelium is underlain by granulation tissue or fibrosis. Treatment of vocal process granuloma centers coupled with conservative voice therapy or treatment of any underlying inciting cause is necessary. If the original inciting cause persists, it may recur locally. Vocal process granuloma has no malignant change potential. In this patient, she recovered completely with no recurrence or malignant change. Both the husky voice and apparent aspiration phenomenon subsided after surgery.

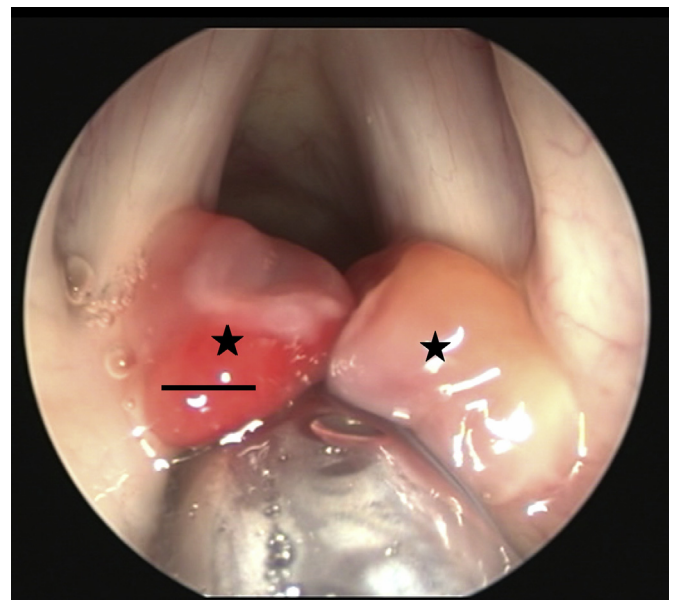


Figure 1 Bilateral large vocal granulomas (stars) are noted over the arytenoids region of the glottis, about 6 mm × 7 mm each. The ulcers can still be seen on the surface (bar = 3 mm).

Conflicts of interest: All authors declare no conflicts of interest.

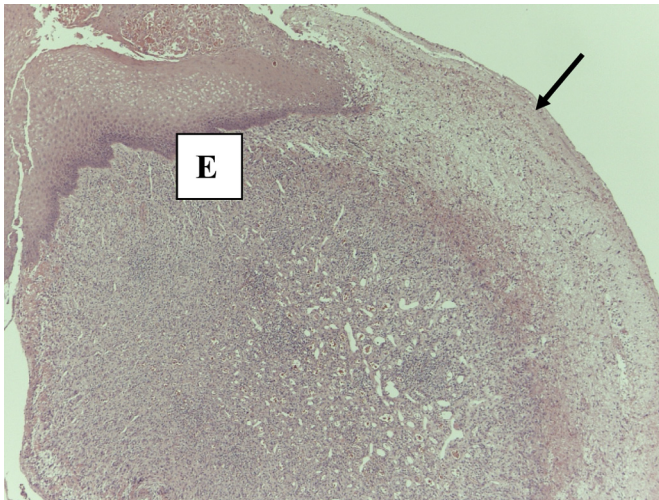


Figure 2 Pathology diagnosis revealed a typical granuloma with an ulcer surface without epithelium (arrow). Hematoxylin and eosin stain, 100 ×. E = epithelium.

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