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Epiglottic cyst as an etiological factor of globus sensation

ESOPHAGUS

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Original Article

ABSTRACT

Background/Aims: Globus is a subjective complaint that describes a sensation of a lump or a foreign body in the throat. Despite being a well-known and common clinical condition, the etiological factors have not been definitely elucidated yet. The study was set up to ascertain the relationship between epiglottic cysts and globus sensation.

Materials and Methods: All patients undergoing investigation and treatments for globus sensation were included in the study. Patients with epiglottic cysts but no other possible causes of globus sensation were constituted the series of patients. Patients were asked to assess the levels of complaint before and after the carbon dioxide (CO2) laser excisions of the cysts.

Results: Epiglottic cysts were found in 10 (5.4%) of the 182 patients. Three of these 10 patients who had concomitant diseases or conditions that may cause globus sensation and one patient who refused the surgery were excluded from the study. All the remaining six patients reported relief of the globus sensation after the CO2 laser excisions of the cysts.

Conclusion: Our results, obtained from this limited series, indicated that epiglottic cysts may be considered as one of the etiological factors of globus sensation.

Keywords: Globus sensation, globus pharyngeus, epiglottic cyst

INTRODUCTION

Globus is a persistent or intermittent sensation of a lump or a foreign body in the throat. Although it is a common complaint accounting for 3%–4% of new referrals to ear-nose-throat (ENT) clinics (1), the etiological factors have not been clearly defined yet. Other than the gastroesophageal reflux disease (GERD), the most well-known underlying pathology, several conditions and diseases have been reported to cause globus sensation, including abnormal upper esophageal sphincter function, tongue base hypertrophy, thyroid diseases, cervical osteophytes, cervical heterotopic gastric mucosa, and psychological factors (2). The association between globus complaint and symptoms of upper aerodigestive tract malignancies urge physicians to perform investigations on patients. However, because of the uncertain etiology of globus sensation, it still remains difficult to establish the standard investigation and treatment strategies (2).

Agada et al. (3) reported a series of four patients with retroverted epiglottis causing globus sensation. In their article, it was also reported that one of the patients had an epiglottic cyst in addition to the defined anatomical deformity of the epiglottis. Observing the relief of the symptoms after partial epiglottectomies, the authors concluded that curled epiglottis might play a role in the globus sensation etiology (3). This report's findings question the relationship between globus and other epiglottic pathologies such as epiglottic cysts. Epiglottis is the most common location of the laryngeal cysts (4), and laryngeal cysts are generally benign lesions and comprise approximately 5% of benign laryngeal lesions (5). They are thought to originate from the obstruction of the mucous gland duct and subsequent dilatation of the mucous glands. In adults, epiglottic cysts are generally asymptomatic but may also cause laryngeal or pharyngeal symptoms. Hoarseness, dysphonia, airway

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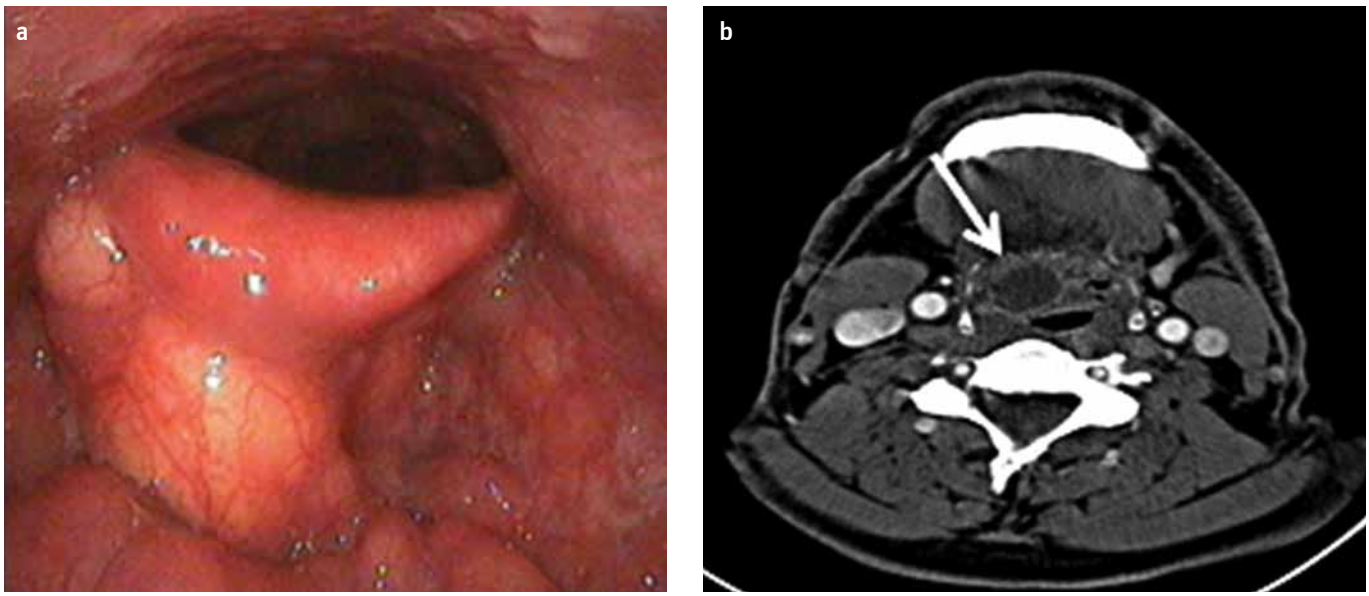

Figure 1. a, b. Fiberoptic endoscopic view of the epiglottic cyst **(a)** and the computed tomographic scan of the neck demonstrating the same cyst (white arrow) **(b)**.

obstruction, acute epiglottitis associated with infected epiglottic cysts, and unexpected intubation difficulty have been reported in the literature (6-8).

It is logical to establish a correlation between globus sensation and epiglottic cysts, and several authors have touched upon this phenomenon thus far. However, after reviewing the literature in English, we were unable to find an article directly related to this issue. Therefore, this study aimed to ascertain the relationship between epiglottic cysts and globus sensation.

MATERIALS AND METHODS

The study was conducted under the approval of the local ethical committee in a tertiary care center. Informed consent was obtained from each patient included in the study. The patients were recruited into this study among a total of 182 patients who had globus sensation and had been referred to our swallowing center for further investigation between July 2012 and January 2014. All of the 182 patients had undergone fiberoptic nasolaryngoscopy, transnasal esophagoscopy (EG-530N Fujinon Corporation, Saitama Shi, Japan), barium swallow study, neck ultrasonography, and cervical X-ray graphy according to our standard globus investigation algorithm. Patients who had epiglottic cysts but no other possible etiological conditions or diseases were included in the study. Surgical excisions of the cysts were offered to all patients, and patients who consented the surgery underwent carbon dioxide (CO_2) laser excisions of the cysts under direct laryngoscopy. The follow-up visits were planned at the first week and second month after the surgeries. The patients were asked to evaluate their globus complaints before and after the surgery to assess the impact of epiglottic cysts on globus sensation etiology.

All statistical analyses were conducted using the Statistical Package for Social Sciences (SPSS Inc., Chicago, IL, USA) 15.0 software for Windows. The means and standard deviations (SD) were reported for continuous variables with normal distributions. The medians and interquartile ranges were reported for continuous variables with skewed distributions. The findings were considered significant at $p<0.05$.

RESULTS

Epiglottic cysts were found in 10 (5.4%) of the 182 patients. Three of these 10 patients were excluded from the study because laryngopharyngeal reflux and cervical osteophytes were also diagnosed (in two patients and one patient, respectively) as concomitant causes of globus sensation. The remaining 4 men and 3 women [mean age was 48.8±14.9 (mean±SD) years] who had epiglottic cysts but no other possible etiological conditions or diseases constituted the presented series of patients. All of the patients presented with the classical sensation of a lump or foreign body in the throat. Patients had complained of globus symptoms for a mean period of 9 months, ranging from 3 to 62 months. One male patient who refused the surgery was excluded from the study; eventually, six patients underwent CO_2 laser excisions of the epiglottic cysts under direct laryngoscopy.

The laryngeal cysts were located on the lingual surface of the epiglottis in four patients and on the lateral free edges in two patients. The minimum and maximum sizes of the cysts were approximately 0.5 cm and 3 cm, respectively, at the time of the surgery. The surgeries were uneventful, and no postoperative complications were occurred. The cysts were totally excised in 5 of the 6 patients. In one patient, the cyst was obliterating the vallecula, and total excision was not achieved (Figure 1). After the marsupialization, the cyst wall over the epiglottis was left behind. Histopathologic examinations showed that five patients had epithelial cysts, and one patient had tonsillar cyst.

Figure 2. Fiberoptic endoscopic view of the epiglottis 2 months after surgery.

Epithelial cysts were lined by squamous epithelium in three specimens and respiratory epithelium in two specimens.

All of the six patients were re-evaluated 2 months after the surgery. The re-epithelialization was perfect in all cases, and no recurrences were observed (Figure 2). Five of the six patients reported complete improvements in their globus complaints, while one patient reported a partial relief 2 months after the surgery.

DISCUSSION

Globus is a common complaint and accounts for 3%–4% of new referrals to ENT clinics (1). The description of the sensation varies to a great extent; however, most of the patients express a lump in the throat, something stuck in the throat, or closing of the throat. The diversity in the description of the complaint extends to its etiology. The globus sensation has been attributed to numerous conditions and diseases, including abnormal upper esophageal sphincter function, hypertrophy of the base of the tongue, thyroid diseases, cervical osteophytes, cervical heterotopic gastric mucosa, and psychological factors (2). GERD is probably the best known cause of globus, although it is not one of the typical symptoms of GERD. The upper aerodigestive tract malignancies should also be considered in the management of patients presenting with globus. As Tsikoudas et al. (9) reported in their retrospective study, 9% of hypopharyngeal cancer patients presented with globus, which was the only complaint.

Diseases or abnormalities affecting the epiglottis may cause globus. Agada et al. (3) reported a series of four patients who presented with globus sensation and who had retroverted epiglottis tips touching the base of the tongue. Observing the complete relief of the symptom following CO_2 laser partial epiglottectomy, the authors concluded that this anatomical variation might play a role in globus etiology and advocated the described surgery in selected cases. Similarly, epiglottic cysts may have an impact on globus sensation. In fact, limited numbers of articles and case reports related to this issue have been published thus far. In their remarkable study, Takwoingi et al. (10) reported three retention cysts (1.2%) in 250 patients presented with globus. Because the aim of the study was to assess the value of rigid endoscopy in globus evaluation, no further data was given regarding the location of the cysts or alteration of the complaint levels following the treatment. Similarly, Tong et al. (11) evaluated the feasibility of transnasal esophagoscopy and functional endoscopic evaluation of swallowing in the assessment of globus complaint in another study. Epiglottic cyst was reported in 1 of the 63 globus patients, but no further data was provided (11). Su and Hsu published their results regarding the safety and effectiveness of the transoral laser marsupialization of epiglottic cysts. However, the authors reported that 23 of the 28 patients with epiglottic cysts presented with lumpy throat complaints; no data regarding the symptom relief following the surgery was given (6).

Although the results of these aforementioned studies imply a relationship between globus and epiglottic cysts, we believe that a lack of literature clarifying this issue still persists. The main complaint of the presented series of patients was globus sensation. To distinguish the epiglottic cysts as the only possible etiological factor, patients who had findings compatible with other causes of globus were excluded from the study. The transoral CO_2 laser excision of the cysts was the only treatment modality, and relief of the symptoms after the surgery indicated that epiglottic cysts might cause globus sensation. Thus, we advocate the surgical excision of the epiglottic cysts for the treatment of globus sensation. On the other hand, epiglottic cysts warrant surgery for different indications as well. Existence of the epiglottic cyst was found to be correlated with acute suppurative infection of the supraglottis (12). Moreover, infected epiglottic cysts were reported to increase the risk of airway obstruction (7).

There is a significant association between epiglottic cyst and globus sensation. This study supports epiglottic cyst as one of the etiological factors of globus sensation. The excision of the epiglottic cysts may not only treat globus sensation but also may play a role in saving the patient from epiglottic cyst-related complications.

Ethics Committee Approval: Ethics committee approval was received for this study from the ethics committee of Institutional Review Board of Gülhane Military Medical Academy (15.02.2012/1491-145-13/1648.4-429).

Informed Consent: Written informed consent was obtained from patients who participated in this study.

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