Original Article

Globus Pharyngeus: A Common Clinical Entity in OPD at a Tertiary-Level Hospital in Bangladesh

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Abstract

Background: Globus pharyngeus is a persistent or intermittent, non-painful sensation of a lump in the throat without an identifiable structural lesion. Although usually benign, it has a multifactorial etiology, including laryngopharyngeal reflux, chronic pharyngitis, thyroid disorders, and psychological factors, requiring careful evaluation to exclude significant underlying disease.

Objective: To determine the frequency and demographic distribution of globus pharyngeus and related throat conditions among patients attending the outpatient department of a tertiary-level hospital.

Methods: This cross-sectional observational study was conducted in the outpatient department of Ad-din Women's Medical College Hospital, Bangladesh. A total of 100 patients presenting with throat discomfort or foreign body sensation were enrolled. Demographic and clinical data were collected using a structured data collection sheet. Diagnoses were established through detailed history, clinical examination, and ENT specialist assessment. Data were analyzed using SPSS version 23 with descriptive statistics.

Result: Among the 100 patients included, 61 (61%) were female and 39 (39%) were male, indicating a female predominance in throat-related complaints. The highest proportion of patients belonged to the 21–30 years age group 32 (32%), followed by the 31–40 years group 27 (27%), suggesting that young and middle-aged adults were most frequently affected. Laryngopharyngeal reflux was the most common diagnosis in both sexes, accounting for the largest share of cases, while chronic pharyngitis was the second most frequent condition. Globus pharyngeus represented a smaller proportion of the study population but was observed more commonly among middle-aged patients than younger individuals. Overall, the findings demonstrated distinct age- and sex-related differences in the distribution of throat disorders, with reflux-related conditions predominating across most demographic groups.

Conclusion: Laryngopharyngeal reflux was the predominant diagnosis, whereas globus pharyngeus remained a clinically important condition. Early recognition and thorough evaluation are essential for accurate diagnosis, appropriate management, exclusion of serious pathology, and patient reassurance.

Keywords: Globus Pharyngeus; Laryngopharyngeal Reflux (LPR); Chronic Pharyngitis; Cross-Sectional Study.

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Introduction

Hippocrates first noted Globus Pharyngeus approximately 2500 years ago.[1] In 1707, Purcell was the first to describe the condition accurately; he believed that globus resulted from pressure from thyroid cartilage due to contraction of strap muscles of the neck.[2] In the past, globus was described as 'Globus Hystericus' due to its frequent association with menopause or psychogenic factors. However, Kenneth Malcomson first coined the more accurate term "Globus Pharyngeus" in 1968 after discovering that most patients experiencing globus did not have a hysterical personality nor were they predominantly female.[3] He advocated a change in terminology to globus pharyngeus.

Aetiology:

The etiology remains elusive. Although data are limited, previous studies investigated links with chronic pharyngitis, laryngopharyngeal reflux, gastroesophageal reflux disease, esophageal dysmotility, abnormalities of the upper esophageal sphincter, pharyngeal inflammation, enlarged lingual tonsils, upper aerodigestive malignancy, psychological factors, and stress. As globus cannot be assessed by clinical examination, there is a validated questionnaire, the Glasgow Edinburgh Throat Scale (GETS), that can appraise with high probability the incidence and severity of globus.

Gastroesophageal Reflux Disease (GERD):

Although there is still considerable debate about the causative role of GERD in patients with globus, gastroesophageal reflux has been suggested to be a major etiology of this symptom, potentially accounting for 23% to 68% of globus patients. Malcosom was the first to link GERD with globus sensation through the use of barium swallow to uncover the presence of reflux in over 60% of the patients of globus.[3] Moreover, Koufman found that 58% of patients with globus had abnormal pH levels.[4] In a study that performed 24-hour double-probe pH monitoring on 25% of patients with globus and hoarseness, 72% of the patients exhibited pathological reflux, and the globus symptom score was significantly higher in patients with GERD than in those without.[5,6] Additionally, globus sensation improved after 8 weeks of proton pump inhibitor therapy.[7] Several population-based surveys have supported such a potential link between GERD and the globus symptom by demonstrating an increased risk of globus among patients with GERD symptoms.[8,9,10] Two basic mechanisms have been proposed to explain the association between GERD and the globus sensation.[11,12,13] The first mechanism involves direct irritation and inflammation of the laryngopharynx by retrograde flow of gastric contents, also known as laryngopharyngeal reflux (LPR), and the second mechanism involves Vasovagal reflux hypertonicity of the UES triggered by acidification of the distal esophagus.[4,14,15,16]

Laryngopharyngeal Reflux (LPR):

From the aspect of an otorhinolaryngologist, the most important connection of the globus is with thyroid diseases and laryngopharyngeal reflux (LPR). While LPR and GERD are both caused by stomach acid backing up, they differ in where the acid causes symptoms.[17] LPR is known as direct irritation and inflammation of the laryngopharynx by retrograde flow of gastric contents. LPR is also called extra esophageal reflux, because the reflux passes beyond the esophagus.[4] This causes different symptoms from typical acid reflux, so different that one might not realize that it is a type of reflux at all. Instead of causing heartburn and indigestion, LPR tends to irritate the voice, throat, and sinuses. Reflux Finding score (RFS) a quantitative guide for diagnosis and treatment of laryngopharyngeal reflux. This validates morphological changes of laryngeal mucosa, which occur as a result of LPR and can be demonstrated by direct laryngoscopy. This relationship is complex, with varying results across different studies using different diagnostic methods[15]. Treatment for LPR typically begins with lifestyle and dietary modification followed by medications like proton pump inhibitors or alginates.

Chronic Pharyngitis:

Chronic pharyngitis is a long-lasting sore throat that lasts over 10 days or frequently returns. It often indicates an underlying problem that needs addressing.[18] The symptoms include soreness or discomfort in the throat. A sensation of a foreign body or something stuck in the throat, hoarseness of the voice, recurrent coughing, or a persistent urge to clear the throat. Underlying health conditions that cause chronic pharyngitis are GERD or LPR, postnasal drip, infection, and mouth breathing.[11,14] Other factors include environmental irritants such as exposure to dust, smoke, fumes, and harsh chemicals. Lifestyle factors such as excessive smoking, heavy alcohol consumption, and intake of very hot and spicy foods.

Abnormal Upper Esophageal Sphincter Function:

Abnormal upper esophageal sphincter function (UES) has also been suggested to be a cause of globus sensation. Elevated UES pressure is much more frequent in patients with globus sensation than in controls (28% vs 3%), suggesting that hypertensive UES is a background factor for globus.[20]

Thyroid Diseases:

Impalpable, ultrasound detectable abnormalities in the thyroid are known to be more common in patients with globus sensation than in controls.[12] Another study noted that as many as one third of patients with thyroid mass complained of globus sensation. Post thyroidectomy patients may also complain of globus pattern symptoms, but these frequently diminish with time.[20]

Pharyngeal Inflammatory Causes :

Many conditions that cause irritation and inflammation of the pharynx, such as pharyngitis, tonsillitis, and chronic sinusitis with postnasal drip, can be the cause of globus sensation by producing increased local sensitivity.[21,22]

Hypertrophy of The Tongue Base:

Globus can be induced by severe hypertrophy of the tongue base due to follicles touching the posterior wall

of the pharynx. Another study demonstrated that hypertrophied follicles were frequent in patients with signs and symptoms of GERD and that the symptoms of hypertrophy of the tongue base that could be confused with GERD.[20]

Psychological Factors and Stress:

Psychogenic problems are often thought to cause or trigger the globus sensation. Personality studies have found higher levels of alexithymia, neuroticism and psychological distress (including anxiety, low mood and somatic concerns) and lower levels of extraversion in patients presenting with globus.[23,24] Indeed, up to 96% of patients with globus sensation exacerbate during periods of high emotional intensity.[25,26]

Diagnosis

1. History and Examination

A diagnosis of globus pharyngeus is based on history and examination. Patients should be asked how long the feeling has been present and to describe it. The presenting complaint may be described in various ways, including lump or ball in the throat, throat swelling, or itching. The symptoms often come and go but constant or worsening symptoms are more concerning. The symptoms should be concerning. Typically, the feeling is central and suprasternal. Globus sensation is often noticed when the patient swallows their own saliva or eats and drinks, so it may be helpful to ascertain the relationship between food and swallowing. Pain on swallowing is not typical for globus sensation. Ask about reflux symptoms and others such as throat clearing, cough and hoarseness. Consider anxiety and ask about other symptoms such as psychological symptoms, including physical symptoms such as palpitations, poor sleep and feelings of panic.

In general practice, full examination of the head and neck is important. The neck should be palpated, ensuring the thyroid gland and cervical lymph nodes are examined. The nose should be checked for evidence of inflamed mucosa, polyps, pus or postnasal drip.

Investigations

1. Fibre Optic Laryngoscopy (FOL)

Fiber optic laryngoscopy is a minimally invasive procedure to examine the throat, vocal cords, and larynx using a thin, flexible tube with a camera. The scope is inserted through the nose to view the structures and diagnose issues like hoarseness, voice changes, or swallowing difficulties.

2. Reflux Symptom Index (RSI)

After obtaining informed consent from the patients with complaints of globus sensation in the throat, a questionnaire was filled out, followed by general and local examination. For LPR diagnosis, the reflux symptom index was filled out. It was a score that was filled out by the patients themselves according to the severity of their symptoms. It was given to the patient as a form of questionnaire. All individuals with a reflux symptom index score of 13 or more were considered to have features of laryngopharyngeal reflux.

The various features of the reflux symptom index score were as follows:

Within the last month, how has the problem affected you?

0= no problem

5= severe problem

Total score= (minimum 0, maximum 45)

Reflux symptom index> 13= features of LPR present.

Symptoms	Score					
	0	1	2	3	4	5
Hoarseness or problem with voice						
Clearing your throat						
Excess throat mucus or postnasal drip						
Difficulty swallowing food, liquid or pills						
Cough after you eat or after lying						
Down						
Breathing difficulties or choking episodes						
Troublesome or annoying cough						
Sensation of something in your throat						
Heartburn, chest burn or indigestion						

Figure: Reflux symptom index

Materials and Methods

Study Design:

Among patients attending the OPD, this cross-sectional study was conducted at the Outpatient Department (OPD) of Ad-din Women's Medical College Hospital, a tertiary-level healthcare facility in Bangladesh. The study aimed to assess the frequency and distribution of globus pharyngeus.

Study Population and Sample Size:

A total of 100 patients attending the OPD during the study period were included in the study. Patients presenting with symptoms suggestive of throat discomfort or foreign body sensation were evaluated clinically and diagnosed accordingly.

Inclusion Criteria:

Inclusion criteria included patients of both sexes and all age groups who attended the OPD and were clinically diagnosed with globus pharyngeus or other related throat conditions.

Exclusion Criteria:

Exclusion criteria included patients with confirmed malignant lesions of the pharynx or larynx, acute upper respiratory tract infections, or those unwilling to participate.

Data Collection:

Data were collected using a structured data collection sheet. The variables recorded included:

- Age (in years)
- Sex (male/female)
- Diagnosis (Dx), including globus pharyngeus and other related conditions

All diagnoses were made based on clinical evaluation by qualified ENT specialists.

Statistical Analysis:

Data were entered, cleaned, and analyzed using Statistical Package for Social Sciences (SPSS) version 23. Descriptive statistics were used to summarize the data. Categorical variables such as sex and diagnosis were expressed as frequencies and percentages, while age was presented in grouped categories. Cross-tabulation was performed where appropriate to assess the distribution of diagnoses across age and sex.

Ethical approval was obtained from the appropriate institutional authority of Ad-din Women's Medical College Hospital. Informed consent was obtained from all participants before data collection, and confidentiality of patient information was strictly maintained.

Result

Table 1 summarizes the demographic characteristics of the study participants. A total of 100 patients were included in the study. Females constituted the majority of the sample 61 (61%), while males accounted for 39 (39%). Regarding age distribution, the largest proportion of patients belonged to the 21–30 years age group 32 (32%), followed by 31–40 years 27 (27%) and 10–20 years 20 (20%). Smaller proportions were observed in the older age groups, with 13 (13%) aged 41–50 years, 5 (5%) aged 51–60 years, and only 3 (3%) aged above 60 years. Overall, the study population was predominantly female and largely comprised of young to middle-aged individuals.

Table 1: Demographic characteristics of the patients

Variables	Number (%)
Sex	
Male	39 (39)
Female	61 (61)
Age (years)	
10-20	20 (20)
21-30	32 (32)
31-40	27 (27)
41-50	13 (13)
51-60	05 (5)
61-70	02 (2)
71-80	01 (1)

Table 2 shows the distribution of diagnoses according to sex. Laryngopharyngeal reflux (LPR) was the most common diagnosis in both males and females, accounting for 19 (48.7%) of male patients and 32 (52.5%) of female patients. Chronic pharyngitis was the second most frequent diagnosis, observed in 16 (41.0%) of males and 21 (34.4%) of females. Globus was the least common diagnosis in both sexes, though it was slightly more prevalent among females 8 (13.1%) compared to males 4 (10.3%). Overall, LPR predominated across both sexes, with minor variations in the distribution of other diagnoses between male and female patients.

Table 2: Distribution of Diagnoses by Sex

Diagnosis	Sex	
	Male (%)	Female (%)
LPR	19 (48.7)	32 (52.5)
C.Pharyngitis	16 (41)	21 (34.4)
Globus	04 (10.3)	08 (13.1)

Table 3 illustrates the distribution of diagnoses across different age groups. Laryngopharyngeal reflux (LPR) was most frequently observed in the 31–40 years age group 23 (45.1%), followed by 21– 30 years 16 (31.4%) and 41–50 years 9 (17.6%). Chronic pharyngitis was predominantly seen in younger patients, with more than half of the cases occurring in the 10–20 years age group 20 (54.1%), and a substantial proportion in the 21–30 years age group 16 (43.2%). In contrast, globus was more commonly diagnosed in middle-aged and older patients, particularly in the 41–50 years age group 4 (33.3%), followed by 31–40 years and 51–60 years 3 (25%). Overall, the table indicates a distinct age-related pattern of diagnoses, with chronic pharyngitis affecting mainly younger individuals, LPR being most prevalent among young to middle-aged adults, and globus occurring more frequently in middle to older age groups.

Table 3: Distribution of Diagnoses by Age

Age	Diagnosis		
	LPR (%)	C.Pharyngitis (%)	Globus (%)
10-20	0	20 (54.1)	0
21-30	16 (31.4)	16 (43.2)	0
31-40	23 (45.1)	01 (2.7)	03 (25)
41-50	09 (17.6)	0	04 (33.3)
51-60	02 (3.9)	0	03 (25)
61-70	01 (2)	0	01 (8.3)
71-80	0	0	01 (8.3)

Discussion

Globus pharyngeus is a commonly encountered clinical symptom characterized by a persistent or intermittent sensation of a lump or foreign body in the throat in the absence of any structural abnormality. Although the condition is generally benign, it often causes significant anxiety among patients and leads to frequent consultations in otorhinolaryngology clinics.[27] The present cross-sectional study was conducted at the outpatient department of a tertiary-level hospital to evaluate the demographic characteristics and associated clinical conditions among patients presenting with throat discomfort and globus-related symptoms.[28]

In the current study, a total of 100 patients were evaluated. The demographic analysis demonstrated a clear female predominance, with females accounting for 61% of the study population compared to 39% males. This finding is consistent with several previous studies that reported a higher prevalence of globus sensation and related throat symptoms among females.[29] The female predominance may be explained by multiple factors, including hormonal influences, psychological stress, and differences in health-seeking behavior. Additionally, psychological components such as anxiety, emotional stress, and somatic symptom perception are known to be more frequently reported among female patients, which may contribute to the increased reporting of globus-related symptoms.[30]

Age distribution analysis revealed that the majority of patients belonged to the young and middle-aged groups, particularly between 21-30 years and 31-40 years. These two age groups together represented the largest proportion of the study population. This observation suggests that throat-related symptoms and reflux-associated disorders are more prevalent among individuals in their active and productive years.[15] Lifestyle factors such as irregular eating habits, occupational stress, increased consumption of spicy foods, smoking, and caffeine intake may play an important role in the development of reflux-related throat symptoms in these age groups.

Regarding the pattern of diagnosis, laryngopharyngeal reflux (LPR) was found to be the most common clinical condition among the study participants. Nearly half of both male and female patients were diagnosed with LPR, making it the predominant etiology of throat discomfort in this study population. This finding strongly supports the growing body of evidence suggesting that reflux-related disorders are a major contributing factor in patients presenting with globus-like symptoms. Reflux of gastric contents into the laryngopharyngeal region may lead to mucosal irritation, inflammation, and increased sensitivity of the pharyngeal structures, ultimately producing the sensation of the lump in the throat.

Chronic pharyngitis was identified as the second most common diagnosis among the patients. Chronic inflammatory changes of the pharynx. Chronic inflammatory changes of the pharyngeal mucosa may

result from repeated exposure to irritants such as dust, smoke, environmental pollutants, and chemical fumes. Lifestyle habits including smoking, alcohol consumption, and frequent intake of hot or spicy foods may further aggravate pharyngeal irritation.[16] The persistent inflammation and mucosal hypersensitivity associated with chronic pharyngitis may mimic or contribute to globus sensation, making differential diagnosis clinically important.

Interestingly, globus pharyngeus itself constituted a relatively smaller proportion of the diagnosis compared to LPR and chronic pharyngitis. However, the condition was slightly more prevalent among female patients than male patients.[28] This observation suggests that a significant proportion of patients presenting with globus-like symptoms may actually have identifiable underlying conditions rather than true idiopathic globus pharyngeus. Therefore, careful evaluation is necessary to identify possible etiological factors before labelling a patient as having primary globus pharyngeus.

Age-wise analysis of the diagnosis revealed distinct patterns. Chronic pharyngitis was predominantly observed in younger individuals, particularly those in the 10-20-year-old age group. This may be related to increased susceptibility to upper respiratory infections, environmental exposures, and lifestyle habits in younger populations. In contrast, laryngopharyngeal reflux was more commonly observed among patients in the 31-40 years age group, which may reflect the cumulative effect of dietary habits, occupational stress, and gastroesophageal reflux mechanisms that become more prominent with age.

Globus pharyngeus was more frequently diagnosed among middle-aged and older individuals, particularly those in the 41-50 years age group. This finding may indicate that structural, functional, or psychosomatic factors become more prominent contributors to globus sensation in later decades of life. Age-related changes in esophageal motility, upper esophageal sphincter function, and increased prevalence of thyroid abnormalities may also play a role.

The findings of the present study highlight the multifactorial nature of globus sensation. Although the symptoms are often benign, they may arise from a variety of underlying conditions including reflux disease, chronic inflammatory disorders of the pharynx, abnormalities of the upper esophageal sphincter, thyroid disease, and psychological stress. Therefore, a comprehensive clinical evaluation is essential in patients presenting with globus symptoms. Careful history taking, thorough head and neck examination, and appropriate investigations such as fiber-optic laryngoscopy and reflux assessment tools may help in identifying the underlying cause and guiding appropriate management.

Overall, the present study emphasizes the importance of considering reflux-related disorders and chronic inflammatory conditions in the differential diagnosis of globus sensation. Early identification and management of these underlying conditions may improve patient outcomes and reduce unnecessary anxiety associated with the symptoms.

Conclusion

Globus pharygeus is a common benign clinical condition frequently encountered in tertiary care OPD settings. Though its etiology remains uncertain, there is no standard protocol for its diagnosis and management. It predominantly affects young to middle-aged individuals, with a slight female predominance. Laryngopharyngeal reflux appears to be the most significant associated condition, followed by chronic pharyngitis. Accurate diagnosis requires detailed history taking, thorough ENT examination, and selective use of investigations such as fiberoptic laryngoscopy and reflux symptom scoring, which are essential as a first step in managing globus. Reassurance remains a cornerstone of management, as the condition is generally non-malignant.

References

1. Harar RP, Kumar S, Saeed MA, Gatland DJ. Management of globus pharyngeus: review of 699 cases. J Laryngol Otol. 2004; 118(1): 522–527.
2. Purcell J. A treatise of vapours or hysteric fits. 2nd ed. London: Edward Place; 1707. 72–74.
3. Malcomson KG. Globus hystericus vel pharyngis (a recommaissance of proximal vagal modalities) J Laryngol Otol. 1968; 82(3): 219–230.
4. Koufman JA. The otolaryngologic manifestations of gastroesophageal reflux disease (GERD): a clinical investigation of 225 patients using ambulatory 24-hour pH monitoring and an experimental investigation of the role of acid and pepsin in the development of laryngeal injury. Laryngoscope. 1991; 53(1): 1–78.
5. Smit CF, van Leeuwen JA, Mathus-Vliegen LM, Devriese PP, Semin A, Tan J, Schouwenburg PF. Gastropharyngeal and gastroesophageal reflux in globus and hoarseness. Arch Otolaryngol Head Neck Surg. 2000; 126(7): 827–830.

6. Sinn DH, Kim JH, Kim S, Son HJ, Kim JJ, Rhee JC, Rhee PL. Response rate and predictors of response in a short-term empirical trial of high-dose rabeprazole in patients with globus. Aliment Pharmacol Ther. 2008; 27(12): 1275–1281.
7. Tokashiki R, Yamaguchi H, Nakamura K, Suzuki M. Globus sensation caused by gastroesophageal reflux disease. Auris Nasus Larynx. 2002; 29(4): 347–351.
8. Rowley H, O'Dwyer TP, Jones AS, Timon CI. The natural history of globus pharyngeus. Laryngoscope. 1995; 105(10): 1118–1121.
9. Timon C, O'Dwyer T, Cagney D, Walsh M. Globus pharyngeus: long-term follow-up and prognostic factors. Ann Otol Rhinol Laryngol. 1991; 100(5): 351–354.
10. Cho YS, Choi MG, Jeong JJ, Chung WC, Lee IS, Kim SW, Han SW, Choi KY, Chung IS. Prevalence and clinical spectrum of gastroesophageal reflux: a population-based study in Asan-si, Korea. Am J Gastroenterol. 2005; 100(4): 747–753.
11. Park KH, Choi SM, Kwon SU, Yoon SW, Kim SU. Diagnosis of laryngopharyngeal reflux among globus patients. Otolaryngol Head Neck Surg. 2006; 134(1): 81–85.
12. Remacle M. The diagnosis and management of globus: a perspective from Belgium. Curr Opin Otolaryngol Head Neck Surg. 2008; 16(6): 511–515.
13. Baek CH, Chung MK, Choi JY, So YK, Son YI, Jeong HS. Role of salivary function in patients with globus pharyngeus. Head Neck. 2010; 32(2): 244–252.
14. Koufman J, Sataloff RT, Toohill R. Laryngopharyngeal reflux: consensus conference report. J Voice. 1996; 10(3): 215–216.
15. Ford CN. Evaluation and management of laryngo-pharyngeal reflux. JAMA. 2005; 294(12): 1534–1540.
16. Tokashiki R, Funato N, Suzuki M. Globus sensation and increased upper esophageal sphincter pressure with distal esophageal acid perfusion. Eur Arch Otorhinolaryngol. 2010; 267(5): 737–741.
17. Koufman J, Sataloff RT, Toohill R. Laryngopharyngeal reflux: consensus conference report. J Voice. 1996; 10(3): 215–216.
18. Wilson JA, Pryde A, Piris J, Allan PL, Macintyre CC, Maran AG, Heading RC. Pharyngo-esophageal dysmotility in globus sensation. Arch Otolaryngol Head Neck Surg. 1989; 115(9): 1086-1090.
19. Mamede RC, De Mello-Filho FV, Dantas RO. Severe hypertrophy of the base of the tongue in adults. Otolaryngol Head Neck Surg. 2004; 131(9): 378–382.
20. Burns P, Timon C. Thyroid pathology and the globus symptom: are they related? A two year prospective trial. J Laryngol Otol. 2007; 121(3): 242–245.
21. Lee JW, Song CW, Kang CD, Hur BW, Jeen YT, Jeon HJ, Lee HS, Lee SW, Um SH, Choi JH, et al. Pharyngoesophageal motility in patients with globus sensation. Korean J Gastroenterol. 2000; 36(1): 1–9.
22. Batch AJ. Globus pharyngeus: (Part II), Discussion. J Laryngol Otol. 1988; 102(3): 227–230.
23. Wareing M, Elias A, Mitchell D. Management of globus sensation by the speech therapist. Logoped Phoniatr Vocol. 1997; 22(1): 39–42.
24. Deary IJ, Wilson JA, Kelly SW. Globus pharyngis, personality, and psychological distress in the general population. Psychosomatics. 1995; 36(6): 570–577.
25. Harris MB, Deary IJ, Wilson JA. Life events and difficulties in relation to the onset of globus pharyngis. J Psychosom Res. 1996; 40(6): 603-615.
26. Thompson WG, Heaton KW. Heartburn and globus in apparently healthy people. Can Med Assoc J. 1982; 126(1): 46-48.
27. Hill J, Stuart RC, Fung HK, Ng EK, Cheung FM, Chung CS, van Hasselt CA. Gastroesophageal reflux, motility disorders, and psychological profiles in the etiology of globus pharyngis. Laryngoscope. 1997; 107(10): 1373–1377.
28. Koufman JA, Amin MR, Panetti M. Prevalence of reflux in 113 consecutive patients with laryngeal and voice disorders. Otolaryngol Head Neck Surg. 2000; 123(4): 385–388.
29. Chevalier JM, Brossard E, Monnier P. Globus sensation and gastroesophageal reflux. Eur Arch Otorhinolaryngol. 2003; 260(5): 273–276.
30. Oridate N, Nishizawa N, Fukuda S. The diagnosis and management of globus: a perspective from Japan. Curr Opin Otolaryngol Head Neck Surg. 2008; 16(6): 498–502.