

An epidemiological study of foreign body sensation throat in the population of Garhwal region of Uttarakhand

Amit Arya¹, RS Bisht^{2,*}, Richa Mina³

^{1,2,3}Dept. of ENT, Base Teaching Hospital, VCSGMS & RI, Srinagar, Uttarakhand

***Corresponding Author:**

Email: dr_rsbisht@rediffmail.com

Abstract

Foreign body sensation or feeling of lump in throat is one of the commonest complaint, with which patient presents to ENT out patient's department. The patient usually complains of "something being stuck in my throat" or "heaviness of throat" or "sticky sensation in throat". Although sometime there may be a pathology found in the throat to go with the symptom but most of the time the symptoms are vague and after extensive workup also no significant cause could be found.

This study aims at finding the diseases associated with the symptom along with the gender, occupational, regional propensity of the symptom amongst the population of Garhwal region of Uttarakhand.

Keywords: Globus pharyngeus, Throat, Pharyngitis, Thyroid, Laryngitis.

Introduction

Foreign body sensation throat or feeling of lump in throat (GLOBUS PHARYNGEUS) is an unusual feeling which 45% of general population must have encountered in their lifetime.⁽¹⁾ Apart from this it constitutes 4% of all ENT complaints⁽²⁾ encountered in out patient department. Though this complaint is equally reported by both, it is females who complain it more frequently.⁽³⁾

Hippocrates some 2500 years ago discovered first case of Globus pharyngeus.⁽⁴⁾ In 1707, Purcell described that globus resulted from the pressure on thyroid cartilage by the contraction of strap muscles. Malcomson⁽⁵⁾ was the first person who actually coined the right term "Globus pharyngeus" in 1968 which was earlier coined as "Globus hystericus" as it was found associated with patients having psychogenic symptoms. He told that these symptoms were also found in non hysterical patients.

There are many causes which may be associated with this complaint.

Among which the most common are

1. Gastroesophageal reflux disease
2. Upper esophageal sphincter dysfunction
3. Inflammatory conditions of pharynx (tonsillitis, pharyngitis)
4. Upper aerodigestive malignancy
5. Hypertrophy of base of tongue
6. Retroverted epiglottis
7. Thyroid diseases
8. Esophageal motility disorders
9. Laryngopharyngeal tumors
10. Psychogenic factors and stress.

Material and Method

The present study is retrospective study taking into account of details of patient who presented in ENT out patient's department with complaint of foreign body

sensation throat. The patient was then evaluated through history, clinical examination, radiographically and finally endoscopy was done. The age, sex, occupation, religion and location of patient was also taken into account. The duration of study was from 1st July 2015 to 1st December 2015.

The location of study was Veer Chandra Singh Garhwali Medical College and Research Institute situated in region of Pauri Garhwal district of Uttarakhand. This institute is the only tertiary center providing the health care support to the people of Garhwal hills of Uttarakhand.

Aims and Objectives

1. To study the prevalence of disease symptom and causes.
2. To study the diseases related with Globus pharyngeus.
3. To look for secondary outcomes of study such as whether age, sex, occupation, religion has any relationship with the symptom.

Gastroesophageal Reflux Disease (GERD): This disease has been accounted for having most common association with Globus (23-68%) patients (6-14).

Kaufmann found that in 58% of patients with globus there were Abnormal pH results.⁽¹²⁾ Cherry et al discovered that 10 out of 12 patients reported symptoms of Globus when acid was infused in the distal esophagus.⁽¹⁵⁾

There are 2 basic mechanisms which are proposed for association of GERD with the Globus-

1. Laryngopharyngo reflux which is irritation of laryngeal and pharyngeal mucosa by back flow of gastric contents.^(11,12,16)
2. Vasovagal reflex i.e. contraction of upper esophageal sphincter due to acidification and dilatation of distal esophagus.⁽¹⁴⁾

Upper Esophageal Sphincter Dysfunction: When cases and controls were taken, it was found that the association of globus was more with patients having abnormal upper esophageal sphincter function (23% vs 3%).⁽¹⁷⁾ Additionally botulinum toxin into upper esophageal sphincter with patients having upper esophageal sphincter dysfunction and globus symptoms were relieved.⁽¹⁸⁾

Pharyngeal Inflammation: When considering the local inflammatory causes such as pharyngitis, tonsillitis, sinusitis with post nasal drip resulting into Globus, it was thought that the cause could be increased local sensitivity due to chronic irritation and inflammation.^(19,20)

Upper Aerodigestive Malignancy: Patients with Globus along with other symptoms such as weight loss, dysphagia, throat pain, referred pain to ear must be ruled out for laryngopharyngeal or upper esophageal malignancy.^(4,21)

Hypertrophy of base of Tongue: Sometimes hypertrophied tongue base could result in Globus sensation, probably due to rubbing of hypertrophied follicles against posterior pharyngeal wall. Mamede et al told that symptoms of hypertrophied tongue base could be confused with GERD, he also demonstrated that hypertrophied follicles were frequent observed in patients with GERD.⁽²²⁾

Retroverted Epiglottis: Just like hypertrophied follicles of base of tongue, the retroverted epiglottis could also result in Globus sensation due to rubbing against posterior pharyngeal wall. The symptoms were relieved after partial epiglottectomy.^(23,24)

Thyroid Diseases: It was observed that one third of patients with thyroid mass experienced Globus sensation (Burns et al).⁽²⁵⁾ This sensation diminished with time after thyroidectomy. The exact association with Globus and thyroid mass is poorly understood, although it has been said that thyroidectomy might relieve GERD symptoms.⁽²⁵⁻²⁷⁾

Psychological Factors and Stress: It has always been major field of study and concluded that psychological factors play an important role in Globus pharyngeus. Few studies based on personalities of patients have also implicated that higher level of alexithymia, neuroticism and psychological distress (including anxiety, low mood and somatic concerns) and lower level of extraversion in patient presents presenting with Globus.^(28,29) Due to increase in level of stress in life the cases of globus pharyngeus are also at a rise which suggests an association between both. It has even been suggested that during high emotional stress the symptoms of Globus exacerbates in 96% of patients.^(30,31) Despite the positive studies few studies fail to prove any such association between psychological state and Globus leading contradictory results.^(3,6,32) Although it has been proven many times over that association between psychiatric diseases and

Globus but distinct explanation is yet to be found.^(1,33) In recent studies two reported an association between LPR and Globus. In these studies it was shown that patients with Globus and LPR showed weaker psychological symptoms in comparison with Globus without LPR, and the anxiety level were significantly higher in patients who had Globus but were not responding well to treatment with PPI.^(11,34)

Observation and Results

Table 1

Variable	n	%
Age in years Mean(SD)	47.4(16.4)	
Gender		
Male	48	48.5
Female	51	51.5
Religion		
Hindu	90	90.9
Muslim	9	9.1
Residence District		
Chamoli	9	9.1
Pauri	58	58.6
Rudraprayag	25	24.3
Tehri	3	3
Uttarkashi	4	4
Occupation		
Agriculture worker	12	12.1
Government service	15	15.2
Retired Government service	8	8.1
Teacher	5	5.1
Housewife	33	33.3
Student	12	12.1
Labour	2	2.0
Business	12	12.1
History of tobacco or alcohol addiction		
Present	49	49.5

Table 2: Details of presenting complaints and examination finding of the studied patients (n=99)

Variable	N	%
Presenting complaints		
Burning Chest	37	37.4
Throat Pain	27	27.3
Hoarseness	14	14.1
Heaviness in chest	12	12.1
Difficulty in swallowing	5	5.1
Others	4	4.0
Examination Oral Cavity		
Normal	88	88.9
Bulky Tongue	3	3.0
Dental Caries	7	7.1
Hyperpigmented tongue	1	1.0
Examination Oropharynx		
Normal	37	37.4
Congested PPW	50	50.5

Congested Tonsils and PPW	6	6.1
Others	6	6.1
Lymph node status		
None	89	89.9
Level 1b positive Left	2	2.0
Level 1b positive Right	9	9.1

Table 3: Details of investigation and provisional diagnosis of the study patients (n=99)

Variable	N	%
Direct laryngoscopy		
Congested arytenoids and post cricoid	30	30.3
Congested arytenoids	19	19.2
Congested PPW	9	9.1
Congested PPW and Arytenoids	6	6.1
Congested arytenoids and Post Part of B	5	5.1
Normal	3	3.0
Others	27	27.3
X-RAY Neck/Barium Swallow		
Normal	86	86.9
Widening of Larynx	11	11.1
Pooling of Dye at Level of Cricopharynx	2	2.0
Diagnosis		
GERD	48	48.5
Chronic Pharyngitis	13	13.1
Cancer	10	10.1
Chronic Laryngitis	5	5.1
Others	23	23.2

Results

In our study, mean age of patients was 47.4(16.4), range 15 to 82 years (Table 1). There was a female predominance. Out of 99 cases, 48 cases (48.5%) were male and 51 cases (51.5%) were female. Majority of the patients 90(90.9%) were Hindu by religion. More than half of the patients 58 (58.6%) were from Pauri district. There were 33(33.3%) housewife and 12(12.1%) students of all cases. History of smoking and alcoholism was present in 49(49.5%) cases among them 45 were males.

A total of 37(37.4%) patients presented with the complaint of burning chest. This was followed by throat pain in 27(27.3%) and hoarseness of voice 14(14.1%). On examination of oral cavity 88(88.9%) cases were wit in normal limit. Dental caries was found in 7 cases. On examination of oropharynx most common finding was congested PPW 50(50.5%) cases followed by congested tonsils along with PPW 6(6.1%) cases. Of all cases 37(37.4%) were normal on oropharynx examination. There was no lymph nodes present in 89(89.9%) cases.(Table 2)

Congested arytenoids and post cricoid was found in 30(30.3%) cases on direct laryngoscopy. The next

common finding on direct laryngoscopy was congested arytenoids 19(19.2%) cases, congested PPW 9(9.1%) and Congested PPW and Arytenoids 6(6.1%) cases. Overall 3 cases were normal on direct laryngoscopy. Of all 86(86.9%) cases were normal on X-RAY Neck/Barium Swallow. A total of 11 (11.1%) cases had widening of larynx and 2(2.0%) cases had Pooling of Dye at Level of Cricopharynx on X-RAY Neck/Barium Swallow.(Table 3)

The most common diagnosis was GERD in 48(48.5%) cases (female 30 vs. male 18 cases). This was followed by Chronic Pharyngitis, Cancer, and Chronic Laryngitis in 13(13.1%), 10(10.1%) and 5(5.1%) cases respectively (Table 3). All the cases of cancer were confirmed by Histopathological examination and all were squamous cell carcinoma. There was no statistically significant difference in presenting diagnosis by age, sex and religion. A statistically significant association was found between presenting diagnosis and residence, occupation with p<0.001. (Table 3)

Conclusion

From the above study it is conclusive that GERD was the commonest cause for Globus sensation among population of Garhwal region of Uttarakhand, chronic pharyngitis being second most common. Among least common were malignancy of laryngopharynx and inflammation of larynx. There was no significant correlation between Globus and age, sex and religion of the but there was positive association of Globus with males addicted to alcoholism and smoking and having local inflammation of pharynx and larynx. Positive association of female gender and that being housewives with features of GERD and Globus was commonly seen. Pauri was the commonest district associated with population having Globus sensation.

References

1. Galmiche JP, Clouse RE, Bálint A, Cook IJ, Kahrilas PJ, Paterson WG, Smout AJ. Functional esophageal disorders. *Gastroenterology*. 2006;130:1459–1465.
2. Moloy PJ, Charter R. The globus symptom. Incidence, therapeutic response, and age and sex relationships. *Arch Otolaryngol*. 1982;108:740–744.
3. Batch AJ. Globus pharyngeus (Part I) *J Laryngol Otol*. 1988;102:152–158.
4. Harar RP, Kumar S, Saeed MA, Gatland DJ. Management of globus pharyngeus: review of 699 cases. *J Laryngol Otol*. 2004;118:522–527.
5. Malcomson KG. Globus hystericus vel pharyngis (a reconnaissance of proximal vagal modalities) *J Laryngol Otol*. 1968;82:219–230.
6. 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;107:1373–1377.
7. Chevalier JM, Brossard E, Monnier P. Globus sensation and gastroesophageal reflux. *Eur Arch Otorhinolaryngol*. 2003;260:273–276.

8. Wilson JA, Pryde A, Piris J, Allan PL, Macintyre CC, Maran AG, Heading RC. Pharyngoesophageal dysmotility in globus sensation. *Arch Otolaryngol Head Neck Surg.* 1989;115:1086–1090.
9. Koufman JA, Amin MR, Panetti M. Prevalence of reflux in 113 consecutive patients with laryngeal and voice disorders. *Otolaryngol Head Neck Surg.* 2000;123:385–388.
10. Oridate N, Nishizawa N, Fukuda S. The diagnosis and management of globus: a perspective from Japan. *Curr Opin Otolaryngol Head Neck Surg.* 2008;16:498–502.
11. Park KH, Choi SM, Kwon SU, Yoon SW, Kim SU. Diagnosis of laryngopharyngeal reflux among globus patients. *Otolaryngol Head Neck Surg.* 2006;134:81–85.
12. 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;101:1–78.
13. Koufman J, Sataloff RT, Toohill R. Laryngopharyngeal reflux: consensus conference report. *J Voice.* 1996;10:215–216.
14. Tokashiki R, Funato N, Suzuki M. Globus sensation and increased upper esophageal sphincter pressure with distal esophageal acid perfusion. *Eur Arch Otorhinolaryngol.* 2010;267:737–741.
15. Park KH, Choi SM, Kwon SU, Yoon SW, Kim SU. Diagnosis of laryngopharyngeal reflux among globus patients. *Otolaryngol Head Neck Surg.* 2006;134:81–85.
16. Ford CN. Evaluation and management of laryngopharyngeal reflux. *JAMA.* 2005;294:1534–1540.
17. Corso MJ, Pursnani KG, Mohiuddin MA, Gideon RM, Castell JA, Katzka DA, Katz PO, Castell DO. Globus sensation is associated with hypertensive upper esophageal sphincter but not with gastroesophageal reflux. *Dig Dis Sci.* 1998;43:1513–1517.
18. Halum SL, Butler SG, Koufman JA, Postma GN. Treatment of globus by upper esophageal sphincter injection with botulinum A toxin. *Ear Nose Throat J.* 2005;84:74.
19. Batch AJ. Globus pharyngeus: (Part II), Discussion. *J Laryngol Otol.* 1988;102:227–230.
20. Lee JW, Song CW, Kang CD, Hur BW, Jeon YT, Jeon HJ, Lee HS, Lee SW, Um SH, Choi JH, et al. Pharyngoesophageal motility in patients with globus sensation. *Korean J Gastroenterol.* 2000;36:1–9.
21. Cathcart R, Wilson JA. Lump in the throat. *Clin Otolaryngol.* 2007;32:108–110.
22. Mamede RC, De Mello-Filho FV, Dantas RO. Severe hypertrophy of the base of the tongue in adults. *Otolaryngol Head Neck Surg.* 2004;131:378–382.
23. Agada FO, Coatesworth AP, Grace AR. Retroverted epiglottis presenting as a variant of globus pharyngeus. *J Laryngol Otol.* 2007;121:390–392.
24. Quesada JL, Lorente J, Quesada P. Partial epiglottectomy as a possible treatment for globus pharyngeus? *Eur Arch Otorhinolaryngol.* 2000;257:386–388.
25. Burns P, Timon C. Thyroid pathology and the globus symptom: are they related? A two year prospective trial. *J Laryngol Otol.* 2007;121:242–245.
26. Marshall JN, McGann G, Cook JA, Taub N. A prospective controlled study of high-resolution thyroid ultrasound in patients with globus pharyngeus. *Clin Otolaryngol Allied Sci.* 1996;21:228–231.
27. Maung KH, Hayworth D, Nix PA, Atkin SL, England RJ. Thyroidectomy does not cause globus pattern symptoms. *J Laryngol Otol.* 2005;119:973–975.
28. Wareing M, Elias A, Mitchell D. Management of globus sensation by the speech therapist. *Logoped Phoniatr Vocol.* 1997;22:39–42.
29. Deary IJ, Wilson JA, Kelly SW. Globus pharyngis, personality, and psychological distress in the general population. *Psychosomatics.* 1995;36:570–577.
30. Harris MB, Deary IJ, Wilson JA. Life events and difficulties in relation to the onset of globus pharyngis. *J Psychosom Res.* 1996;40:603–615.
31. Thompson WG, Heaton KW. Heartburn and globus in apparently healthy people. *Can Med Assoc J.* 1982;126:46–48.
32. Moser G, Wenzel-Abatzi TA, Stelzeneder M, Wenzel T, Weber U, Wiesnagrotzki S, Schneider C, Schima W, Stacher-Janotta G, Vacariu-Granser GV, et al. Globus sensation: pharyngoesophageal function, psychometric and psychiatric findings, and follow-up in 88 patients. *Arch Intern Med.* 1998;158:1365–1373.
33. Siupsinskiene N, Adamonis K, Toohill RJ, Sereika R. Predictors of response to short-term proton pump inhibitor treatment in laryngopharyngeal reflux patients. *J Laryngol Otol.* 2008;122:1206–1212.
34. Maran A, Jacobson I. Cervical osteophytes presenting with pharyngeal symptoms. *Laryngoscope.* 1971;81:412–417.