

## A Cross Sectional Study on Demographic Profile and Determinants of Globus Sensation

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### Abstract:

**Introduction:** Globus pharyngeus, is a sensation of something stuck in the throat and it is a very common clinical condition in ENT practice. It is intermittent or persistent sensation of lump or foreign body in throat. It is relieved by solid food or liquid ingestion and aggravated with dry swallow. It commonly involves middle aged females and this clinical condition is long lasting, difficult to treat and has tendency to occur again and again. It is very difficult to stabilize any standard protocol of diagnosis of globus sensation due to its varied etiology. Careful history, examination and investigation are crucial steps in the diagnosis of globus pharyngeus. Globus pharyngeus is defined as:

1. Persistence/intermittent sensation of lump in throat or foreign body sensation in throat for at least 12 weeks.
2. Sensation occurs in between meals
3. Absence of any dysphagia/odynophagia
4. Absence of achalasia, pathological GERD, motility disorder like scleroderma of esophagus.

### Aim and Objectives:

1. To estimate the common cause of globus sensation in patients attending ENT OPD of MAMC, Agroha.
2. To study the demographic profile of patients with globus.

**Methodology:** This cross-sectional study was conducted at Maharaja Agrasen Medical College, Agroha, Hisar. Based on the findings by Moloy et al (The globus symptom, incidence, therapeutic response and age and sex relationship. Moloy PJ, Charter R; Arch Otolaryngology. 1982; 108(11):740.), the prevalence of Globus sensation in the general population is estimated to be 4.1%, assuming a relative precision in the estimate of 80%.

**Result:** The study showed that globus pharyngeus was a clinical condition with a female predominance (62.7%). The most common age group affected was 31-40 years (33.3%), with a mean age of 39.5 years. The condition was more common in the rural population (75.3%), with the most affected occupations being farmers/labourers (32.0%) and the most affected education level being illiterate (34.6%). The majority of those affected were married (88%). The common causes were gastroesophageal reflux disease (36.6%), upper esophageal sphincter dysfunction (19.3%), esophageal motor disorder (12%), pharyngeal inflammatory cause (7.9%), psychological factors and stress (6.6%), thyroid swelling (6%), upper aerodigestive malignancy (2.6%), tongue base hypertrophy (2%), cervical osteophytes (2%), Eagle's syndrome (2%), retroverted epiglottis (1.3%), and Vallecula cyst (1.3%).

**Conclusions:** Based on our study, we conclude that globus pharyngeus predominantly affects females of age group 31-40 years, mostly married, illiterate farmer/labourer belonging to rural population and most common cause being gastroesophageal reflux disease.

**Keywords:** Globus Pharyngeus, Hystericus, Gastroesophageal Reflux Disease (GERD).

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## Introduction

Globus (Latin globus= globe), a lump feeling in throat, a symptom generally affecting women under 50 years of age. The globus sensation was mentioned over 2025 years ago by Hippocrates, but it was first accurately described in 1707 by John Purcell who believed that globus was due to pressure on the thyroid cartilage. [1] It was considered to be hysterical symptom (Greek hystericus related to uterus). Globus hystericus affects anxious women, [2] in a community of apparently healthy adults; globus can affect 21.5-46%. [3] Over all globus pharyngeus is equally prevalent in healthy women and men.[4] Women are affected three times more than men, women are also more likely to seek medical advice regarding the symptom. [4-6]. Many theories are postulated for globus, none of them has been proven outright. Most of the ENT surgeons believe that globus arises as a result of non-coordination of muscle in the throat or muscle tension. Swallowing is a complex process involving many muscles, some muscles relax, other constrict in order to swallow. In globus, cricopharyngeus most likely fails to relax.

Globus pharyngeus has more recently been defined as:

1. Persistence/intermittent sensation of lump in throat or foreign body sensation in throat for at least 12weeks.
2. Sensation occurs in between meals.
3. Absence of any dysphagia/odynophagia.
4. Absence of achalasia, pathological gastroesophageal reflux (GERD), other motility disorder having recognized pathological basis like scleroderma of esophagus.

Most of the time, we do not use any scoring system to grade globus pharyngeus. In globus patients reflux finding score and reflux symptom index are not particularly valid diagnostic tools. [7] Glasgow Edinburgh throat score [GETS] has been validated for use in globus but is not widely used. [8]

## Potential causes of globus

1. Gastroesophageal reflux disease (GERD)
2. Upper esophageal sphincter dysfunction
3. Psychological factors and stress
4. Pharyngeal inflammatory causes like tonsillitis, pharyngitis & chronic sinusitis

5. Esophageal motor disorders
6. Upper aerodigestive malignancy
7. Retroverted epiglottis
8. Tongue base hypertrophy
9. Thyroid diseases
10. Cervical osteophytes
11. Cervical heterotopic gastric mucosa
12. Rare laryngopharyngeal tumors

## Others

1. Temporomandibular joint (TMJ) disorders.
2. Eagle's syndrome (enlarged styloid process)
3. Hyper viscosity of nasopharyngeal mucosa
4. Excessive laryngeal and pharyngeal tension
5. Salivary hypo-function [9]

## Aims and Objectives

1. To estimate the common cause of globus sensation in patients attending ENT OPD of Maharaja Agrasen Medical College Agroha Hisar.
2. To study the demographic profile of patients with globus.

## Material and Methods

The cross-sectional study was conducted on 150 patients of either gender of any age visiting outpatient department with complaint of globus sensation like something stuck in throat selected by exclusion and inclusion criteria in the department of Otorhinolaryngology, Maharaja Agrasen Medical College Agroha, Hisar over a period October 2020 to March 2022. Prior approval was received Institutional Scientific and Ethical Committees.

## Sample size:

Based on the findings by Moloy et al. (1982) [5] (The incidence of globus symptom, age sex relationships and therapeutic response. Moloy PJ, Charter R; Arch Otolaryngology. 1982; 108(11):740.), the prevalence of Globus sensation in the general population was estimated to be 4.1%. [4] Assuming a relative precision in the estimate of 80%, we calculated the sample size according to following formula:

$$\text{Formula } N = [3.84 \times p \times (1-p)] / (r \times p)^2$$

Where, p = prevalence of hyper nasal resonance postoperatively r = relative precision

The calculated sample size is 150.

**Inclusion criteria:**

1. Patient of either gender, of any age.
2. Complaint of globus sensation, like something stuck in the throat.

**Exclusion criteria:**

1. Non-consenting individuals
2. Post radiation patients having head neck malignancy.
3. Patients with condition resulting in impaired salivation.
4. Patients with foreign body sensation diagnosed with a foreign body via x-ray, CT or clinical examination.

**Statistical Methods:**

Data was entered into MS Excel and analyzed using SPSS Version 16.0. Continuous parametric data was reported as Means and standard deviation while continuous non- parametric data was reported as median and interquartile range. Categorical data was reported in percentages. Comparison of categorical data between the groups was done using Chi square test. Comparison of parametric continuous data between two groups was done using independent t-test and between more than two groups was done using ANOVA.

**Study tools:**

A predesigned and pretested proforma was used for collecting the information in the study. The proforma comprised of detailed history of patients regarding demographic details and clinical history,

local examination, endoscopic findings and required investigation.

**Methodology:**

After thorough explanation informed consent was obtained from all the patients. Patient’s medical history was taken, after verbal and written consent. Those patients who satisfied the eligibility criteria were included in the study.

After taking consent from patient, clinical examination of oral cavity oropharynx using tongue depressor and head light was done, Nasal cavity and nasopharynx were examined using Thudicum nasal speculum and posterior rhinoscopy mirror. Larynx glottis and supraglottic region were examined with indirect laryngoscopy mirror and 70-degree rigid endoscope.

The patients with inconclusive clinical examination were referred for psychiatry evaluation because globus hystericus is one of the important potential causes of globus pharyngeus.

The following investigations were conducted.

- Routine blood examination including, thyroid function test, CBC, RBS, LFT, LFT, HIV, HCV, HBSAG, BT/CT
- Barium Swallow
- X-ray skull and X-ray neck
- USG neck
- Upper GI endoscopy
- FNAC and HPE

Diagnostic algorithm of globus pharyngeus is depicted in the figure 1.

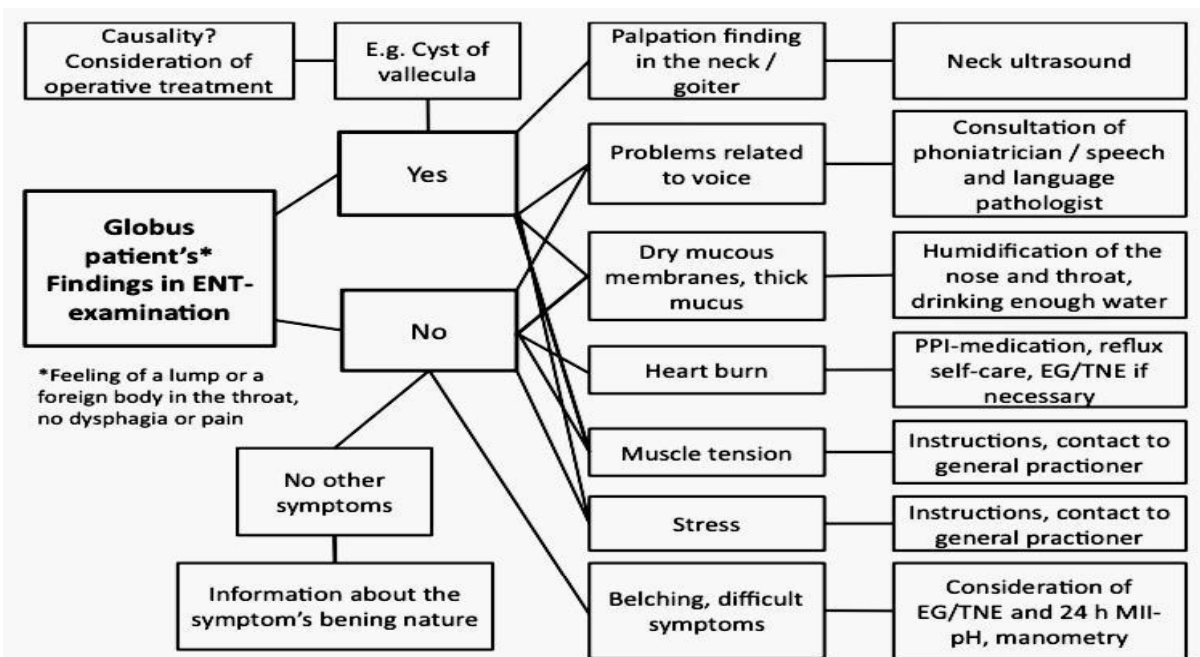


Figure 1: Diagnostic algorithm of globus pharyngeus

**Result****Table 1: Distribution of cases according to age of the patient (N = 150)**

Age groups	Number of cases (%)
20 years or below	10 (6.6%)
21 – 30 years	36 (24%)
31 – 40 years	50 (33.3%)
41 – 50 years	25 (16.6%)
51 – 60 years	13 (8.6%)
61 years and above	16 (10.6%)
Mean age (SD) in years	39.47 (13.77)
Minimum age	13
Maximum age	75

**Table 2: Distribution of patients according to more or less than the mean age**

Age of the patient in years	Number of cases (%)
< 40 years	77 (51.3%)
≥ 40 years	73 (48.7%)

**Table 3: Distribution of cases according to sex of the patient (N = 150)**

Sex of the patient	Number of cases (%)
Male	56 (37.3%)
Female	94 (62.7%)

**Table 4: Distribution of cases according to marital status (N =150)**

Marital status	Number of cases (%)
Married	132 (88.0%)
Unmarried	18 (12.0%)

**Table 5: Distribution of cases according to residence of the patient (N = 150)**

Residence of the patient	Number of cases (%)
Rural	113 (75.3%)
Urban	37 (24.7%)

**Table 6: Distribution of cases according to socio-economic status and indicators (N = 150)**

	Categories	Number of cases (%)
Occupational status	Businessman	14 (9.3%)
	Govt. employee	23 (15.3%)
	Farmer/Labourer	48 (32.0%)
	Housewife	25 (16.6%)
	Unemployed/Student	40 (26.7%)
Educational status	Illiterate	52 (34.6%)
	Up to Middle school	26 (17.3%)
	Up to Intermediate	25 (16.7%)
	Graduate and above	47 (31.3%)

**Table 7: Distribution of cases according to positive findings on investigation (N = 150)**

Investigation	Number of cases (%)	
	Positive	Negative/Not done
Clinical examination	26	124
IDL/VDL	19	131
Barium Swallow	60	90
Upper GI Endoscopy	31	119
USG Neck	9	131
24h pH monitoring	7	143
Hematological factors	11	139
Psychological factors/stress	10	140
NCCT/CECT Neck	8	142
FNAC	10	140
HPE	6	144
Manometry	7	143

**Table 8: Distribution of cases according to diagnosis (N = 150)**

Diagnosis of the patient		Number of cases (%)
Gastroesophageal Reflux Disease (GERD)		55 (36.6%)
Upper esophageal sphincter dysfunction (UESD)		29 (19.3%)
Esophageal motor disorders (EMD)		18 (12%)
Pharyngeal inflammatory cause (PIC)	Pharyngitis	5 (3.3%)
	Chronic sinusitis	4 (2.6%)
	Tonsillitis	3 (2%)
Psychological factor and stress		10 (6.6%)
Thyroid swelling		9 (6%)
Upper aerodigestive malignancy (UAM)	Ca. base of tongue	2 (1.3%)
	Ca. oesophagus	2 (1.3%)
Tongue base hypertrophy (TBH)		3 (2%)
Cervical osteophytes		3 (2%)
Eagle's syndrome		3 (2%)
Retroverted epiglottis		2 (1.3%)
Vallecula cyst		2 (1.3%)

**Table 9: Association of diagnosis of the patient according to age of the patient (N = 150)**

	Mean Age (SD)		p-value
	Diagnosis present	Diagnosis absent	
GERD	42.65 (14.00)	37.62 (13.37)	0.031
UESD	32.90 (9.18)	41.04 (14.26)	0.004
EMD	32.61 (7.75)	40.40 (14.16)	0.024
PIC	37.58 (10.92)	39.63 (14.01)	0.623
Psychological factors	42.90 (11.13)	39.22 (13.94)	0.416
Thyroid swelling	47.11 (15.19)	38.98 (13.59)	0.086
UAM	59.25 (3.77)	38.92 (13.55)	0.003
TBH	16.33 (2.89)	39.94 (13.50)	0.003
Cervical osteophytes	54.33 (15.95)	39.16 (13.62)	0.059
Eagle's syndrome	35.33 (10.79)	39.55 (13.84)	0.601
Retroverted epiglottis	21.50 (0.71)	39.71 (13.70)	0.063
Vallecula cyst	65.50 (0.71)	39.11 (13.53)	0.007

**Table 10: Association of diagnosis of the patient according to age of the patient (N = 150)**

	Number of cases (%)		p-value
	Age < 40 years (N = 77)	Age ≥ 40 years (N = 73)	
GERD	22 (28.6%)	33 (45.2%)	0.035
UESD	22 (28.6%)	7 (9.6%)	0.003
EMD	14 (18.18%)	4 (5.47%)	0.017
PIC	7 (9.09%)	5 (6.84%)	0.613
Psychological factors	3 (3.89%)	7 (9.58%)	0.162
Thyroid swelling	2 (2.59%)	7 (9.58%)	0.072
UAM	0 (0%)	4 (5.47%)	0.037
TBH	3 (3.89%)	0 (0%)	0.088
Cervical osteophytes	1 (1.29%)	2 (2.73%)	0.529
Eagle's syndrome	1 (1.29%)	2 (2.73%)	0.529
Retroverted epiglottis	2 (2.59%)	0 (0%)	0.166
Vallecula cyst	0 (0%)	2 (2.73%)	0.144

**Table 11: Association of diagnosis of the patient according to sex of the patient (N = 150)**

	Number of cases (%)		p-value
	Male (N = 56)	Female (N = 94)	
GERD	10 (17.85%)	45 (47.87%)	<0.001
UESD	17 (30.35%)	12 (12.76%)	0.008
EMD	10 (17.85%)	8 (8.51%)	0.088
PIC	6 (10.71%)	6 (6.38%)	0.344
Psychological factors	2 (3.57%)	8 (8.51%)	0.241
Thyroid swelling	0 (0%)	9 (9.57%)	0.017

UAM	3 (5.35%)	1 (1.06%)	0.114
TBH	1 (1.78%)	2 (2.12%)	0.885
Cervical osteophytes	1 (1.78%)	2 (2.12%)	0.885
Eagle's syndrome	1 (1.78%)	2 (2.12%)	0.289
Retroverted epiglottis	2 (3.57%)	0 (0%)	0.065
Vallecula cyst	2 (3.57%)	0 (0%)	0.065

**Table 12: Association of diagnosis of the patient according to marital status of the patient (N = 150)**

	Number of cases (%)		p-value
	Married (N = 132)	Unmarried (N = 18)	
GERD	51 (38.63%)	4 (22.22%)	0.175
UESD	24 (18.18%)	5 (27.77%)	0.334
EMD	17 (12.87%)	1 (5.55%)	0.370
PIC	11 (8.33%)	1 (5.55%)	0.684
Psychological factors	8 (6.06%)	1 (5.55%)	0.933
Thyroid swelling	4 (3.03%)	0 (0%)	0.454
UAM	3 (2.27%)	0 (0%)	0.518
TBH	3 (2.27%)	0 (0%)	0.518
Cervical osteophytes	2 (1.51%)	1 (5.55%)	0.251
Eagle's syndrome	2 (1.51%)	0 (0%)	0.599
Retroverted epiglottis	2 (1.51%)	0 (0%)	0.599
Vallecula cyst	2 (1.51%)	0 (0%)	0.599

**Table 13: Association of diagnosis of the patient according to residence of the patient (N = 150)**

	Number of cases (%)		p-value
	Urban (N = 37)	Rural (N = 113)	
GERD	12 (32.43%)	43 (38.05%)	0.538
UESD	12 (32.43%)	17 (15.04%)	0.020
EMD	6 (16.21%)	12 (10.61%)	0.363
PIC	2 (5.4%)	10 (8.84%)	0.503
Psychological factors	4 (10.81%)	6 (5.3%)	0.244
Thyroid swelling	1 (2.7%)	8 (7.07%)	0.331
UAM	0 (0%)	4 (3.53%)	0.246
TBH	0 (0%)	3 (2.65%)	0.317
Cervical osteophytes	0 (0%)	3 (2.65%)	0.317
Eagle's syndrome	0 (0%)	3 (2.65%)	0.317
Retroverted epiglottis	0 (0%)	2 (1.76%)	0.415
Vallecula cyst	0 (0%)	2 (1.76%)	0.415

## Discussion

K.G. Malcomson in 1968 coined most accurately the term globus pharyngeus, with gastroesophageal reflux being possible cause of globus. Globus sensation was commonly found in midline between sternal notch and thyroid cartilage. [11] Suspicion of organic cause quite high if globus sensation not found at its proper anatomical site. [12] Globus pharyngeus commonly affects middle aged females. Psychological disorders, gastroesophageal reflux disease (GERD), laryngopharyngeal reflux (LPR), esophageal motor disorder, improper function of upper esophageal sphincter (UES) were most common causes of globus. [13-15] the average age of patients with globus sensation is 49 years. This is based on a review of several studies, including the present study, which found that one third of the cases were aged between 31 and 40 years.

The youngest study participant was aged 13 years old while the oldest study participant was aged 75 years. The mean age of the study group was 39.5 years. More than half of the study group was aged more than the mean age of the group. In a study by Woosuk Park et al. (2005) [16], 85 patients were selected (median age of patients being 49 years, interquartile range 44.0 – 65.0; 76% white; 34% male). In another study by Frank zerbib et al. (2006) [17] 150 patients were included, 102 patients were females (mean age 52 +/- 14 yr. range from 16 – 84). In a study by Lihua Peng et al. (2015) [18], 24 patients with globus ( $53.3 \pm 2.3$  y, 58% female) were compared with age matched and sex-matched patients with non-obstructive dysphagia ( $52.5 \pm 2.5$  y, 58% female). In a study by E R Rasmussen et al. (2018) [19], mean age of the patients was found to be 48 years (range 20-88 years).

The mean age of patients with globus sensation is

higher than the mean age of the general population. This may be due to the fact that globus sensation is more common in older adults. However, it is important to note that there is a wide range of ages in patients with globus sensation, and the condition can occur at any age.

In the present study majority of study participants were females. And most of them in the study group were married. Eighteen cases, on the other hand, were not married at the time of recruitment. In a study by Young-seok Cho et al. (2005) [20], out of 1417 patients studied, 762 were males and 655 were females. In a study by Lihua Peng et al. (2015)[18], 24 patients with globus ( $53.3 \pm 2.3$  y, 58% females) were compared with 24 ages matched and sex-matched patients with non-obstructive dysphagia ( $52.5 \pm 2.5$  y, 58% female), and 21 healthy individuals worked as controls ( $27.6 \pm 0.6$  y, 52% female). In a study by E R Rasmussen et al. (2018), [19] female predominance was found in this study (ratio of female to male is 1.49).

In the present study almost three-fourths of the study group resided in rural areas. In the present study approximately a third of the study group was engaged in farming and labour. More than a quarter of the cases recruited were either students or unemployed. A sixth of the cases recruited were engaged in housework. More than a third of the cases were illiterate, while a comparable proportion had at least attained graduation. In a study by Bei Tang et al. (2016), [21] the prevalence of globus patients was higher in urban region than those from rural area (26.5% vs 16.4%,  $P=0.001$ ).

In the present study 40% of the cases in the study group had positive finding on a Barium Swallow. In contrast, 4.7% of cases had positive finding on Manometry of the esophageal sphincter and 24 hr pH monitoring. More than one-fifth (20.6%) of cases had positive findings on an Upper GI endoscopy. In a study by C J Webb et al (2000), [22] Rigid endoscopy was most common investigation performed on 61% of patients, barium swallow in (56%), combination of barium swallow and endoscopy performed in 17.5%. In a study by G W Back et al (2000) [23], commonest finding in barium swallow was acid reflux (18.5%), hiatus hernia (12%). In a study by Y M Takwoingi et al (2006) [24], rigid endoscopy was performed with patients of globus pharyngeus. In 217 patients (86%) examination on rigid endoscopy was normal. cricopharyngeal spasm in 12 patients (4.8%), reflux in 11 patients (4.4%). pharyngitis in 2 patients (0.8%), web in 2 patients (0.8%) and retention cyst in 3 patients (1.2%).

In the present study the distribution of cases with the final diagnosis was made. As can be observed, more than a third of the cases were diagnosed as

gastroesophageal reflux disease. Almost a fifth of the cases were diagnosed with upper esophageal sphincter dysfunction. Eighteen cases had esophageal motor disorder. A total of twelve cases had pharyngeal inflammatory causes like pharyngitis, sinusitis and tonsillitis. Nine cases experienced globus due to thyroid swelling. Four cases had an upper aerodigestive malignancy. Three cases each had tongue base hypertrophy, cervical osteophytes and Eagle's syndrome. Two cases each had retroverted epiglottitis and a vallecula cyst. In a study J A Koufman et al (2000)[25], 73% (57/78) had abnormal PH testing, 50% (57/113) had PH-documented reflux, Vocal cord neoplastic lesion in (88%) and muscle tension dysphonia (70%). In a study by G W Back et al (2000), [26] 92 patients were identified and all had normal ENT examination. Acid reflux was most common associated symptom seen in (11%) cases. According to the study by Douglas M Hicks et al (2002) [27], majority of subjects (86%) had findings associated with reflux. Stefan Tauber et al (2002) [28] found GERD in (43%), hiatal hernia in (43%), H- pylori gastritis in (23%). In a study by Rui Celso Martins Mamede et al (2004) [29], 5 cases of HBT detected in 306 patients over a period of 2 years, corresponding to 1.6% (5/306) of total samples, 4% (4/101) with pharyngolaryngeal sign, 7.5% (4/53) with gastroesophageal reflux. A study by Y M Takwoingi et al (2006) [24] showed that in 217 patients (86%) examination with rigid endoscopy was normal, cricopharyngeal spasm in 12 patients (4.8%), reflux in 11 patients (4.4%). pharyngitis in 2 patients (0.8%), web in 2 patients (0.8%), retention cyst in 3 patients (1.2%). In a study by P Burns et al (2006) [30], 200 patients were taken for study, among them one-third of patients with thyroid swelling complained of globus symptom. Ryoji Tokashiki et al (2010) [31] concluded that, the globus sensation was due to elevated UES pressure. E R Rasmussen et al (2018) [19] found that the most common pathological findings were reflux (15.6%) and post-infectious inflammation (10.6%).

In the present study the mean age of the patients with GERD, Upper airway malignancy, and vallecula cyst was significantly higher than patients who did not have this diagnosis. In contrast, the mean age of patients with IESD, EMD and Tongue base hypertrophy was significantly lower than cases without the same. As can be observed from the tables, a significantly higher proportion of GERD and upper airway malignancy cases had age more than 40 years. Consequently, cases with UESD and EMD had a significantly higher proportion of cases younger than 40 years old. In a study by Young-Seok Cho et al (2005), [20] the prevalence of GERD was 3.5% (95 CI, 2.6-4.5) heartburn and acid regurgitation associated with globus sensation, chest pain, dysphagia and

hoarseness of voice.

In the present study, a significantly higher proportion of GERD and thyroid swelling were females. In contrast, UESD was diagnosed in a higher proportion among male patients compared to females. There was no statistically significant association between sex and prevalence of other diagnosis. The association of diagnosis with the marital status of the patient. As can be observed, a statistically significant association with marital status was observed with none of the diagnosis for Globus syndrome. This implies marital status was not significantly associated with any cause of Globus.

In the present study upper esophageal sphincter dysfunction was significantly associated with residence of the patient. A significantly higher proportion of cases diagnosed with UESD resided in urban area compared to rural area. No statistically significant association was observed for other diagnosis with type of residence. In a study by Tang et al (2016). [21] 3006 respondents completed the questionnaires, giving a response rate of 89.5%. The prevalence of globus was higher in participants from the urban region than those from the rural areas (26.5% vs 16.4%,  $P = 0.001$ ). No sex difference was observed ( $P = 0.082$ ). Anxiety (39.8% vs 22.3%,  $P = 0.001$ ), depression (31.2% vs 18.0%,  $P = 0.001$ ) and sleep disorders (23.7% vs 13.6%,  $P = 0.001$ ) were significantly more common in respondents with globus than in those without.

### Conclusion

Globus pharyngeus is a common clinical condition and its cause remains uncertain. For its diagnosis and treatment there is no standard protocol. Current study showed a female predominance (62.7%), most common age group is 31-40yr (33.3%) mean age 39.5yr, common in rural population (75.3%) most common occupational status was Farmer/Labourer (32.0%), Educational status was illiterate (34.6%), married were (88%). Common causes were Gastroesophageal reflux disease (GERD) in (36.6%), Upper esophageal sphincter dysfunction (UESD) (19.3%), Esophageal motor disorder (EMD) (12%), Pharyngeal inflammatory cause (PIC) (7.9%), Psychological factor and stress (6.6%), Thyroid swelling (6%), Upper aerodigestive malignancy (UAM) (2.6%), Tongue base hypertrophy (TBH) (2%), Cervical osteophytes (2%), Eagle's syndrome (2%), Retroverted epiglottis (1.3%) and Vallecule cyst (1.3%).

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