

Globus Sensation at Throat: A Study of Laryngoscopy Findings in 320 Patients

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Abstract:

➤ *Background:*

Globus sensation, the feeling of a lump in the throat, is a common clinical presentation with various potential etiologies. This study aimed to investigate the laryngoscopic findings in patients presenting with globus sensation to better understand its underlying causes.

➤ *Methods:*

A prospective study was conducted over two years (January 2021 - December 2023) in a private practice setting. 320 patients complaining of long-term foreign body sensation in the throat underwent rigid rod laryngoscopy. Patients with a history of surgical or oncological intervention to the throat and neck were excluded. Demographic data and laryngoscopic findings were recorded and analyzed.

➤ *Results:*

The study population comprised 226 females (71%) and 94 males (29%), with the majority (31.90%) in the 31-40 years age group. Laryngoscopic examination revealed normal findings in 65.62% of patients. The most common abnormal findings were hypertrophied tongue base (15.62%) and laryngopharyngeal reflux (7.5%). Less common findings included hypopharyngeal mass/ulcer (2.5%), supraglottic mass (1.87%), elongated retroverted epiglottis (1.25%), and large uvula (1.25%).

➤ *Conclusions:*

This study highlights the diverse laryngoscopic presentations associated with globus sensation. While the majority of patients exhibited normal findings, a significant proportion had identifiable abnormalities, particularly hypertrophied tongue base and laryngopharyngeal reflux. These findings underscore the importance of thorough laryngoscopic examination in the evaluation of globus sensation, even when the likelihood of finding a structural cause is low. The results also suggest that globus sensation is often multifactorial, potentially involving a complex interplay of structural, functional, and psychosomatic factors. Further research is needed to elucidate the pathophysiological mechanisms underlying globus sensation, particularly in cases where no structural abnormalities are apparent.

Keywords: Globus Sensation; Laryngoscopy; Hypertrophied Tongue Base; Laryngopharyngeal Reflux; Throat Disorders.

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I. INTRODUCTION

Globus sensation, often described as a feeling of a "lump" or "foreign body" in the throat, is a common symptom encountered in clinical practice [1]. This sensation can manifest as tightness, pressure, or the feeling of being strangled, and patients may describe it as a "flap of skin," "a hair," or a "blob of phlegm" stuck in their throat [2]. The term "globus pharyngeus" or "globus hystericus" is used when no identifiable cause can be found [3].

Epidemiological studies suggest that while men and women over 50 years of age are equally affected, women tend to seek medical attention more frequently [4]. Additionally, women younger than 50 years of age appear to be more susceptible to this condition than men in the same age group [5]. Stress from various sources can exacerbate the symptoms, and the fear of throat cancer often heightens anxiety, further intensifying the discomfort [6].

➤ *The Etiology of Globus Sensation is Diverse and can Include:*

- Gastroesophageal reflux disease (GERD) [7]
- Laryngopharyngeal reflux (LPR) [8]
- Contact between hypertrophied tongue base, the uvula, and a retroverted epiglottis [9]
- Cervical osteophytes at C5–C6 [10]
- Eagle's syndrome (long styloid process) [11]
- Thyroid enlargement [12]
- Benign or malignant tumors of the pharynx (rare) [13]

Despite its prevalence, the exact pathophysiology of globus sensation remains uncertain, and there is no standardized protocol for its diagnosis and management [14]. Current best practices emphasize the importance of a thorough history-taking and laryngoscopic examination as crucial first steps in evaluating and managing patients presenting with globus symptoms [15]. This study aims to investigate the laryngoscopic findings in 320 patients presenting with globus sensation, providing valuable insights into the underlying causes and potential management strategies for this common yet challenging condition.

II. MATERIALS AND METHODS

➤ *Study Design and Setting*

This prospective study was conducted over a period of 2 years (January 2021 - December 2023) in a private practice setting. The study design was chosen to provide real-time data on the laryngoscopic findings in patients presenting with globus sensation [16].

➤ *Participant Selection*

• *Inclusion Criteria:*

- ✓ Patients complaining of long-term foreign body sensation in the throat.

- ✓ No history of surgical or oncological intervention to the throat and neck.
- ✓ Patients able to comply with the rigid rod laryngoscopy procedure.

• *Exclusion Criteria:*

- ✓ Patients with complaints other than foreign body sensation in the throat
- ✓ Previous history of surgical or oncological intervention to the throat and neck
- ✓ Patients with craniofacial trauma

These criteria were established to ensure a focused study population and minimize confounding factors [17].

➤ *Equipment*

The following equipment was used for the laryngoscopic examinations:

- ✓ 4mm 70-degree endoscopic rod
- ✓ Camera system
- ✓ Data and image storage system
- ✓ 10% lidocaine spray (for local anesthesia)
- ✓ Savlon solution (used as a defogger)

This equipment selection is consistent with standard practices in otolaryngological examinations [18].

➤ *Procedure*

• *Pre-Procedure Anesthesia:*

10% lidocaine spray was applied to the throat for local anesthesia [19].

• *Patient Positioning:*

- ✓ The patient was seated with the head in a neutral position, eyes open, and face relaxed.
- ✓ The patient was instructed to move their hips back in the chair, straighten their back, lean forward, and tilt their chin up "as if they are sniffing flowers" [20].

• *Examiner Positioning:*

The examiner was seated in front of or to the side of the patient, allowing for optimal visualization and instrument control [21].

• *Examination Technique:*

- ✓ The patient was asked to open their mouth and gently protrude their tongue.
- ✓ The protruded tongue was gently held with a gauze-covered, gloved left hand.
- ✓ The patient was counseled and advised to breathe normally throughout the procedure.
- ✓ A face-down 70-degree endoscope, attached to the camera and light system, was inserted into the oropharynx.

- ✓ The patient was encouraged to keep their eyes open throughout the examination to minimize the gag reflex [22].

• *Structural Evaluation:*

The following structures were systematically examined:

- ✓ Base of tongue
- ✓ Vallecule
- ✓ Piriform sinuses
- ✓ Posterior oropharyngeal wall
- ✓ Posterior hypopharyngeal wall
- ✓ Larynx

This comprehensive evaluation protocol allows for a thorough assessment of the potential causes of globus sensation [23].

➤ *Data Collection and Analysis*

Demographic data, patient history, and laryngoscopic findings were recorded for each participant. The findings were categorized based on the observed anatomical and pathological features. Statistical analysis was performed to determine the prevalence of various laryngoscopic findings in the study population [24].

III. RESULTS

➤ *Demographic Data*

A total of 320 patients were included in this study. The gender distribution showed a predominance of female

patients, with 226 females (71%) and 94 males (29%) (Figure 1).

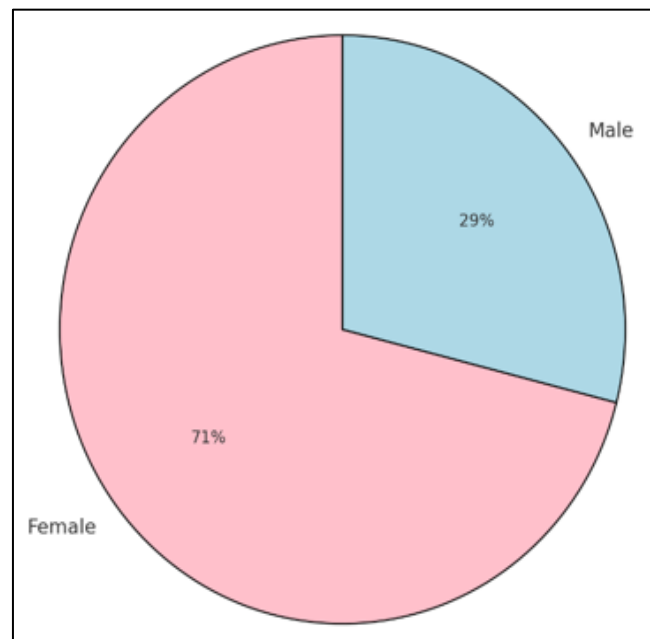


Fig 1 Gender Distribution of Patients

The age distribution of patients is presented in Table 1. The majority of patients (31.90%) were in the 31-40 years age group.

Table 1 Age Distribution of Patients

Age group	Number	Percentage
<20 years	12	3.75%
21-30 years	48	15%
31-40 years	102	31.90%
41-50 years	56	17.5%
51-60 years	44	13.75%
>60 years	58	18.12%
Total	320	100%

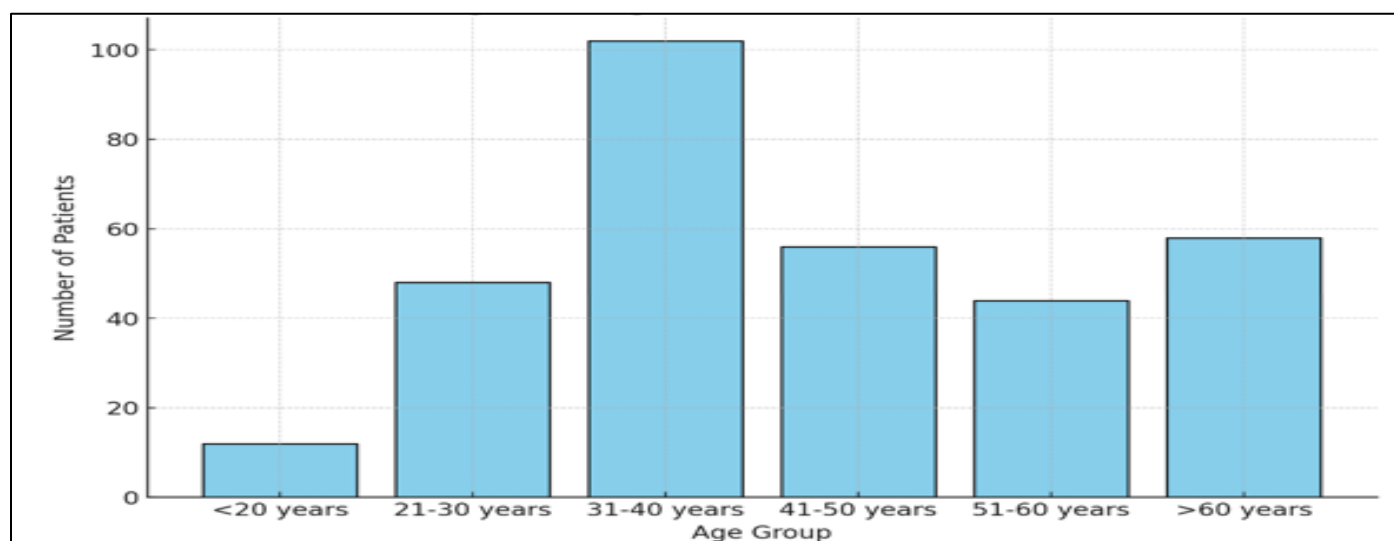


Fig 2 Age Distribution of Patients

➤ Laryngoscopic Findings

The laryngoscopic examination revealed a range of findings, summarized in Table 2. Notably, 65.62% of patients had normal laryngoscopic findings.

Table 2 Laryngoscopic Findings

Findings	Number	Percentage
Normal	210	65.62%
Hypertrophied tongue base	50	15.62%
Laryngopharyngeal reflux (LPR)	24	7.5%
Hypertrophied tongue base + LPR	6	1.87%
Hypopharyngeal mass/ulcer	8	2.5%
Supraglottic mass	6	1.87%
Elongated retroverted epiglottis	4	1.25%
Large uvula	4	1.25%
Vallecular cyst	2	0.62%
Others	6	1.87%
Total	320	100%

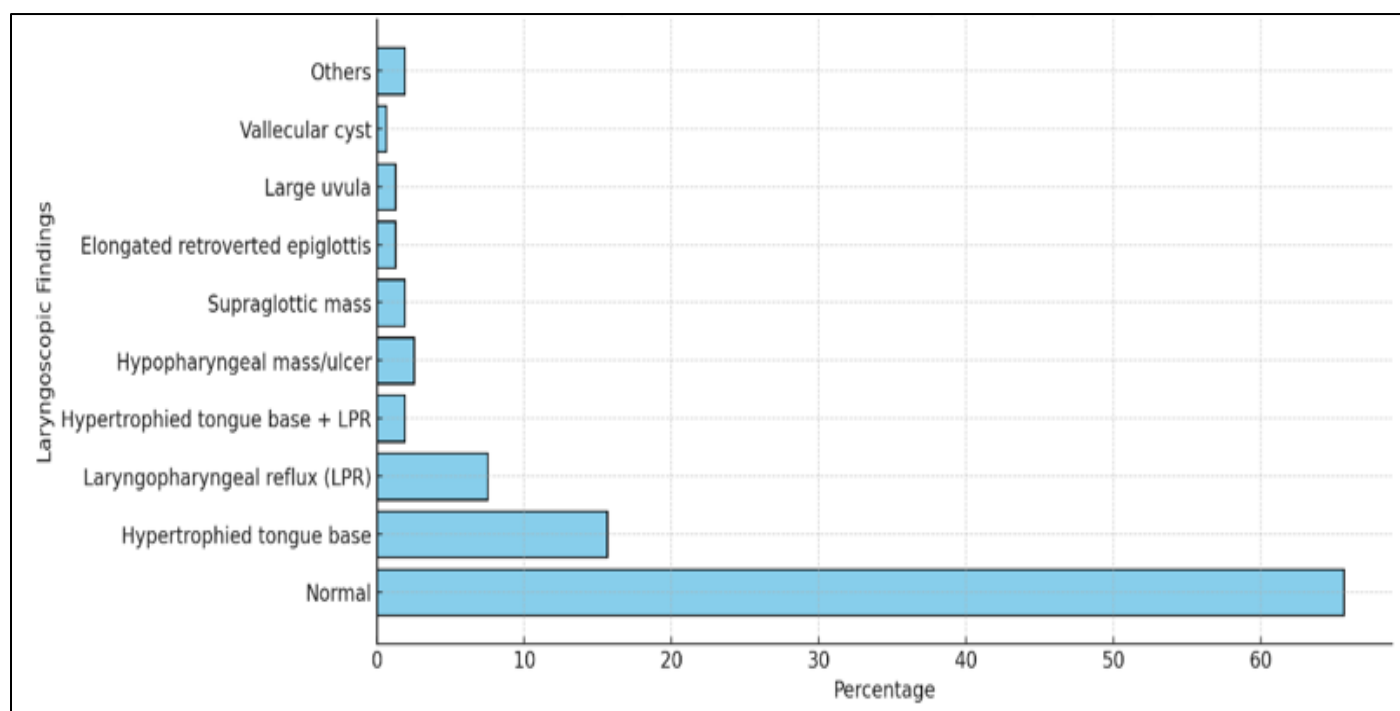


Fig 3 Distribution of Laryngoscopic Findings

➤ Key Observations

- **Normal Findings:** The majority of patients (65.62%) had normal laryngoscopic findings, suggesting that globus sensation often occurs in the absence of visible structural abnormalities.
- **Hypertrophied Tongue Base:** This was the most common abnormal finding, observed in 15.62% of patients. An additional 1.87% of patients had both hypertrophied tongue base and laryngopharyngeal reflux.

- **Laryngopharyngeal Reflux (LPR):** LPR was the second most common abnormal finding, present in 7.5% of patients as a sole finding and in 1.87% of patients in combination with hypertrophied tongue base.
- **Other Findings:** Less common findings included hypopharyngeal mass/ulcer (2.5%), supraglottic mass (1.87%), elongated retroverted epiglottis (1.25%), and large uvula (1.25%).

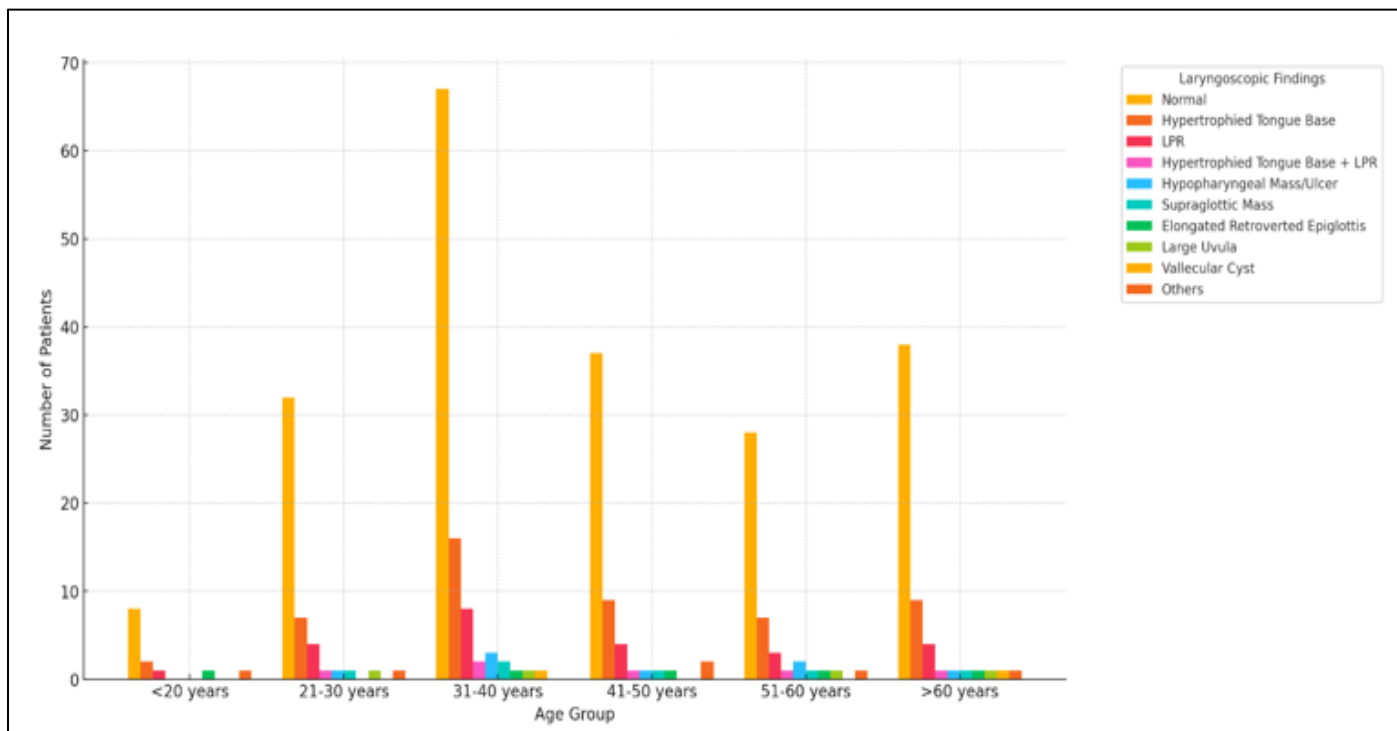


Fig 4 Correlation Between Age and Laryngoscopic Findings

This figure could help identify any age-related trends in the occurrence of specific laryngoscopic findings.

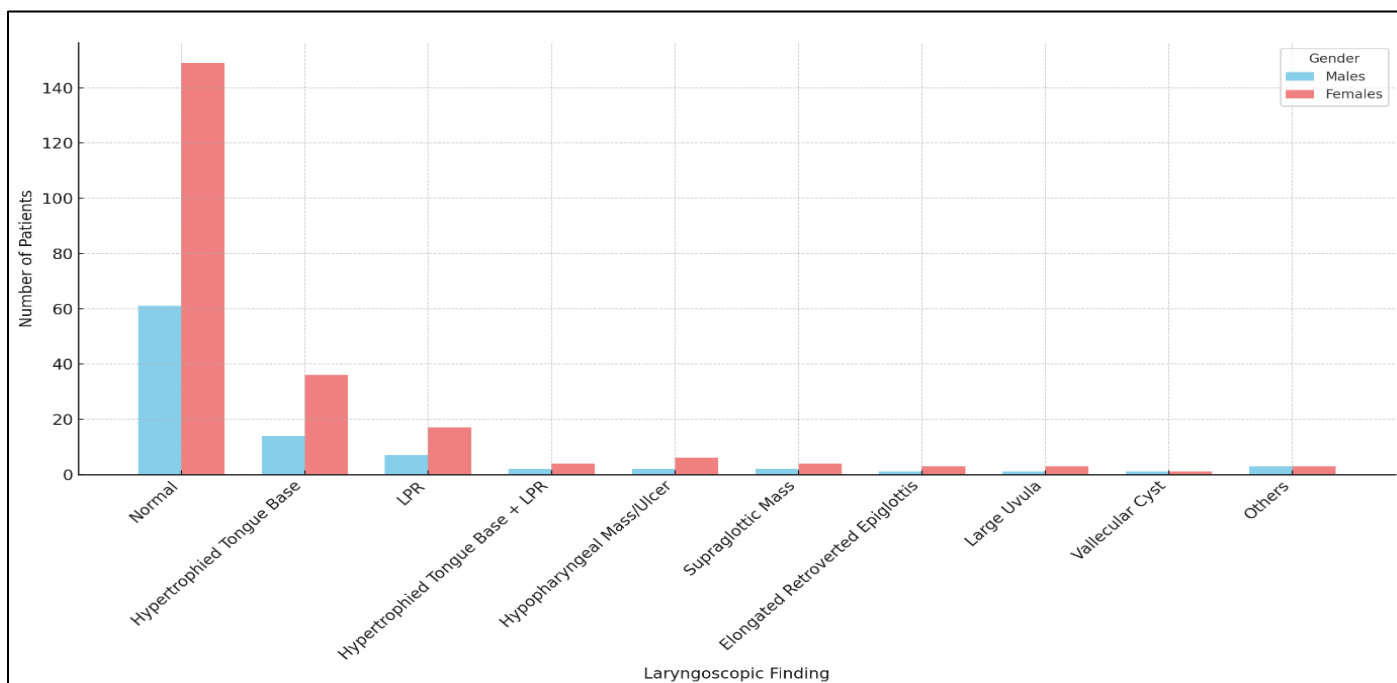


Fig 5 Gender Differences in Laryngoscopic Findings

This visualization could highlight any gender-specific patterns in the presentation of globus sensation and associated laryngoscopic findings.

IV. DISCUSSION

This study provides valuable insights into the laryngoscopic findings associated with globus sensation in a large cohort of 320 patients. The results offer important

implications for both clinical practice and our understanding of this common yet complex condition.

➤ Normal Laryngoscopic Findings

One of the most striking findings of this study is that 65.62% of patients presented with normal laryngoscopic findings. This high prevalence of normal examinations aligns with previous research suggesting that globus sensation often occurs in the absence of visible structural abnormalities [25].

This finding underscores the complex and potentially multifactorial nature of globus sensation, which may involve sensory disturbances, psychosomatic factors, or subtle physiological changes not apparent on laryngoscopy [26].

➤ *Hypertrophied Tongue Base*

Hypertrophied tongue base was the most common abnormal finding, observed in 15.62% of patients. This finding supports the hypothesis that contact between an enlarged tongue base and the epiglottis or posterior pharyngeal wall may contribute to the sensation of globus [27]. The mechanical irritation or altered sensory feedback from this contact could explain the persistent feeling of a lump in the throat reported by patients [28].

➤ *Laryngopharyngeal Reflux (LPR)*

LPR was the second most common abnormal finding, present in 7.5% of patients as a sole finding and in 1.87% of patients in combination with hypertrophied tongue base. These results are consistent with previous studies that have implicated LPR in the pathogenesis of globus sensation [29]. The irritation and inflammation caused by reflux may lead to altered sensory perception in the laryngopharyngeal region, contributing to the globus sensation [30].

➤ *Gender and Age Distribution*

The predominance of female patients (71%) in our study population aligns with previous research suggesting that women are more likely to seek medical attention for globus sensation [31]. However, the reasons for this gender disparity remain unclear and warrant further investigation. The peak incidence in the 31-40 age group (31.90%) is an interesting finding that differs from some previous studies reporting a higher prevalence in older age groups [32]. This discrepancy may reflect differences in healthcare-seeking behavior or could indicate a shift in the epidemiology of globus sensation that merits further exploration.

➤ *Less Common Findings*

The identification of less common findings such as hypopharyngeal mass/ulcer (2.5%), supraglottic mass (1.87%), and elongated retroverted epiglottis (1.25%) highlights the importance of thorough laryngoscopic examination in patients presenting with globus sensation. While these conditions are relatively rare, their potential clinical significance underscores the value of laryngoscopy as a diagnostic tool in the evaluation of globus sensation [33].

➤ *Clinical Implications*

The results of this study have several important clinical implications:

- The high prevalence of normal laryngoscopic findings suggests that clinicians should be cautious about attributing globus sensation to visible structural abnormalities alone [34].
- The frequent occurrence of hypertrophied tongue base and LPR indicates that these conditions should be specifically assessed and considered in the management of globus sensation [35].

- The identification of rare but potentially serious conditions (e.g., masses) emphasizes the importance of laryngoscopy in the initial evaluation of patients with globus sensation, even when the likelihood of finding a structural cause is low [36].

V. LIMITATIONS AND FUTURE DIRECTIONS

This study has several limitations that should be considered. First, the single-center design may limit the generalizability of the findings to other populations. Second, the lack of a control group makes it difficult to determine the specificity of the observed laryngoscopic findings to globus sensation. Future studies should address these limitations by including multi-center designs and control groups [37].

Additionally, longitudinal studies are needed to assess the natural history of globus sensation and the long-term outcomes associated with different laryngoscopic findings. Further research should also explore the potential role of combined pH monitoring and impedance studies in elucidating the relationship between LPR and globus sensation [38].

In conclusion, this study provides a comprehensive overview of laryngoscopic findings in patients with globus sensation, emphasizing the complex and often multifactorial nature of this condition. The results underscore the value of laryngoscopy in the diagnostic workup of globus sensation while highlighting the need for a holistic approach that considers both structural and functional factors in the management of this challenging condition [39].

VI. CONCLUSION

This prospective study of 320 patients presenting with globus sensation provides valuable insights into the laryngoscopic findings associated with this common and often perplexing condition. The key findings and implications of this research can be summarized as follows:

- **Prevalence of Normal Findings:** A significant majority (65.62%) of patients exhibited normal laryngoscopic findings, underscoring the complex nature of globus sensation and the potential involvement of factors not visible during laryngoscopic examination.
- **Common Abnormal Findings:** Hypertrophied tongue base (15.62%) and laryngopharyngeal reflux (7.5%) emerged as the most frequent abnormal findings, suggesting these conditions should be given particular attention in the evaluation and management of globus sensation.
- **Demographic Patterns:** The study revealed a higher prevalence of globus sensation among women (71%) and a peak incidence in the 31-40 age group (31.90%), which may have implications for targeted screening and intervention strategies.
- **Rare but Significant Findings:** The identification of less common but potentially serious conditions, such as hypopharyngeal masses (2.5%), highlights the importance

of thorough laryngoscopic examination in all patients presenting with globus sensation.

- **Diagnostic Value:** While laryngoscopy may not reveal abnormalities in the majority of cases, it remains a crucial tool in the diagnostic workup of globus sensation, capable of identifying both common and rare conditions that may contribute to or mimic the symptoms.
- **Multifactorial Nature:** The diverse array of findings observed in this study reinforces the notion that globus sensation is often multifactorial, potentially involving a complex interplay of structural, functional, and psychosomatic factors.

These findings have important implications for clinical practice, emphasizing the need for a comprehensive approach to the evaluation and management of globus sensation. While laryngoscopy plays a vital role in excluding structural pathologies, clinicians should be prepared to consider and address non-visible causes, including sensory disturbances and psychosomatic factors.

Future research should focus on elucidating the pathophysiological mechanisms underlying globus sensation, particularly in cases where no structural abnormalities are apparent. Additionally, longitudinal studies are needed to assess the natural history of the condition and the long-term outcomes associated with different laryngoscopic findings.

In conclusion, this study contributes to our understanding of the laryngoscopic presentation of globus sensation and provides a foundation for improved diagnostic and therapeutic approaches. By recognizing the diverse manifestations of this condition, clinicians can offer more targeted and effective care to patients experiencing the troubling symptoms of globus sensation.

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