

Review: Current Trends in the Diagnosis and Management of Globus Pharyngeus

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ABSTRACT

Aim: To review recent literature on the diagnosis and management options for globus pharyngeus. **Recent Findings:** Strong evidence for the cause of globus pharyngeus is lacking however there is some research to suggest a possible link between laryngopharyngeal reflux (LPR) and globus pharyngeus. Radiological investigations used to find the cause of globus pharyngeus are often normal with little evidence to support their routine use. There are no long term controlled studies investigating the effectiveness of proton pump inhibitors (PPI's) for the treatment of globus pharyngeus however, these are commonly used. A recent nonplacebo-controlled study has shown promising results using liquid alginate suspension to treat laryngopharyngeal reflux symptoms. Other treatment modalities used, such as speech and language therapy, have shown some improvement in symptoms but these are often small trials. **Summary:** Globus pharyngeus is a clinical diagnosis. Investigations should be reserved for those with atypical symptoms. Thorough clinical evaluation and examination, including fiberoptic laryngoscopy, are key points in management.

Keywords: Globus Pharyngeus; Hystericus; Laryngopharyngeal Reflux

1. Introduction

Globus Pharyngeus is commonly described as the sensation of a lump in the throat. Representing approximately 3% - 4% of new referrals to ENT clinics [1-3], it can cause many diagnostic and management problems. There are a constellation of symptoms that are associated with this condition such as throat clearing, chronic cough, hoarseness and catarrh. These symptoms, suggestive of pharyngeal irritation, cause considerable debate within the literature regarding the aetiology, pathophysiology, diagnosis and subsequent management of globus pharyngeus. The theory that laryngopharyngeal reflux (LPR) is the most likely organic cause of globus symptoms is described widely however strong evidence supporting this is lacking.

2. Search Strategy

Literature search of AMED (1985-present), BNI (1985-present), EMBASE (1980-present), MEDLINE (1950-present), PsychINFO (1806-present), and CINAHL (1981-present) was performed. Keywords used were globus pharyngeus (199 matches), globus hystericus (176 matches) and globus syndrome (993 matches). Articles were subsequently selected and included based on the quality of the study and the strength of evidence.

3. Aetiology

Many factors have been postulated to cause globus symptoms however none have been proven definitively. These causes range from cricopharyngeal spasm, lingual tonsil, granular pharyngitis, cervical osteophytosis, hiatus hernia, gastroesophageal reflux, sinusitis, post nasal drip and goitre through to psychiatric causes [4].

Heterotopic gastric mucosa has been found in some patients with globus pharyngeus and could be a potential aetiology [5]. The location of the heterotopic gastric mucosa has been found in the post-cricoid area and cervical oesophagus on rigid pharyngoesophagoscopy [6]. Some patients have an abnormally curled epiglottis tip indenting the tongue base that can lead to persistent globus pharyngeus symptoms [7].

Interestingly, recent research has suggested that those with autoimmune conditions have a significantly increased prevalence of globus symptoms when compared to the healthy population [8]. Furthermore, there has been an association of globus pharyngeus and allergy. In a preliminary study investigating allergic skin tests in patients with globus pharyngeus versus a control group, it was found that there was a statistically significant difference of positive skin test results between globus and the control group [9].

There is a wealth of literature linking globus pharyn-

geus and its severity to psychological issues. Globus patients were significantly more depressed than controls with a significant proportion having had a major life event within 2 months of onset of symptoms in a case control series published [10]. Also it has been found in studies that globus subjects have significantly elevated levels of psychological distress, including anxiety, low mood, and somatic concern when compared with the control subjects [11].

The reflux of stomach contents into the laryngopharynx, causing irritation and inflammation, is a contentious theory to explain the cause of globus pharyngeus. Studies have suggested that night time exposure to reflux could be a contributory factor in LPR as several physiological changes occur during sleep. These include prolonged oesophageal acid contact time, decreased upper oesophageal sphincter pressure, increased gastric acid secretion, decreased salivation, decreased swallowing and a decrease in conscious perception of acid [12]. It is the authors views that laryngopharyngeal reflux is likely to be a cause of the globus sensation in a sub-group of individuals, but that this is unlikely to explain the problem of globus pharyngeus in its entirety.

It is important to note that non-specific swallowing complaints, including LPR, affect about 59% of individuals over 65 years. Physiological changes in connective tissue and muscle strength due to the aging process can explain some of these swallowing difficulties [13].

4. Diagnosis

The diagnosis of globus pharyngeus is principally a clinical one. Typically, patients may have had the symptom for a long period prior to seeking attention. The symptom may have become more prominent or started following a recent throat infection or stressful event such as the death of a relative [4]. The sensation of foreign body in the throat is often more obvious on swallowing saliva and usually disappears on eating food [14]. Any worrying additional symptoms such as pain, food sticking in the throat or weight loss must be investigated thoroughly.

Examination is usually unremarkable [14] however signs found during flexible nasendoscopy such as posterior laryngeal oedema, true vocal fold oedema and pseudosulcus [15] may be indicators of laryngopharyngeal reflux. These are not diagnostic however, as they have been reported in up to 70% of the general population [16].

Investigations previously used to identify the causes of globus symptoms are numerous but the evidence regarding their usefulness within normal practice is controversial. Clinicians often utilise investigations to rule out malignancy in a patient with globus symptoms.

Such investigations are described below.

4.1. 24 Hours pH Monitoring

The 24 hour dual sensor ambulatory pH monitoring, which is considered by some to be the gold standard in detecting gastroesophageal reflux, has been used to investigate any links between globus pharyngeus and acid reflux. Mixed conclusions have been found with some investigators reporting no findings of reflux and others reporting that extraesophageal reflux was proven in up to 32.6% of patients with pure globus pharyngeus [17]. When LPR is found, the dual pH monitor can not predict the severity of the patients symptoms or signs [18]. It is important to note that most of these trials contain low numbers and often utilise a pH 4.0 threshold for positive findings of reflux. Problems arise because the larynx lacks the protective layers of the lower oesophagus and it is believed that lower amounts of acid exposure at higher pH can cause irritation and that the exposure time required to produce this effect is much less than in the oesophagus. In addition to this, the presence of activated pepsin within gastric contents may coat the larynx and result in laryngeal inflammation and irritation for a longer period than the original exposure [19].

4.2. Barium/Contrast Swallow studies

Barium swallows are often requested to evaluate patients with globus pharyngeus and to exclude pharyngeal and upper oesophageal neoplastic lesions [20]. In two recent studies, with patient numbers totalling 3286, there was no serious pathology detected and no malignancies found [14,21]. The commonest finding during these studies was cervical osteophyte indentation.

The sensitivity of barium swallow to pick up small upper aero-digestive tumours, particularly in the hypopharynx, is low and has been reported to miss approximately 50% of these [22]. Given this low sensitivity and lack of findings in patients with pure globus pharyngeus, along with the costs involved and the attendant radiation effects, it was suggested that barium swallows should be reserved for patients with atypical symptoms or risk factors for upper aero-digestive tumours [14,21].

4.3. Rigid Endoscopy

The value of rigid endoscopy in the investigation of globus symptoms remains questionable. A recent retrospective study of 250 rigid endoscopies for globus pharyngeus demonstrated 217 (86.8%) were entirely normal [23]. Given that abnormal findings in this study were not neoplastic and included cricopharyngeal spasm, reflux, pharyngitis, webs and retention cysts; the argument raised is that rigid endoscopy may be inappropriate in the management of globus patients.

Rigid endoscopy is, overall, the best way of ruling out malignancy however the risks, costs and discomfort

associated with this can be avoided in patients who do not have atypical features or findings on history and examination.

4.4. Thyroid Ultrasound

There has been some investigation into thyroid pathology as a potential cause of globus sensation. In one paper, consisting of 43 patients with globus pharyngeus and 33 controls, it was found that ultrasound-detectable abnormalities were significantly more common in patients with globus pharyngeus than in controls [24].

5. Management

5.1. Laryngopharyngeal Reflux (LPR) Treatment

The leading current theory is that laryngopharyngeal reflux causes globus symptoms [25-27]. A survey of general practitioners in 2005 showed the vast majority were unaware of laryngopharyngeal reflux (LPR) and its association with globus pharyngeus [28]. Conversely, in a recent survey of ENT consultants in the UK, 90% believed in laryngopharyngeal reflux and greater than 50% prescribed proton pump inhibitors (PPI's) for the treatment of this [29]. The regimen used varied within this survey, with most prescribing once daily PPI. Interestingly, a more recent double blind, randomised, placebo-controlled trial has suggested that the globus pharyngeus patient who presents with a normal head and neck examination and without sinister otolaryngologic complaints does not benefit from once-daily PPI therapy [30]. To strengthen this argument, further research has shown that laryngopharyngeal symptoms improve significantly more slowly than esophageal symptoms following acid-suppression therapy [31]. This has led to the treatment of laryngopharyngeal reflux (LPR) with higher doses of PPI for a longer period to decrease laryngeal oedema [32]. This consists of twice daily PPI for a period of 3 to 6 months. Timing of administration of the PPI is essential. They should be administered 30 mins before food. This is to allow maximal therapeutic blood levels, prior to activation of the proton pumps within the stomach by eating [19]. Unfortunately, long term randomised controlled trials are lacking for the efficacy of this treatment.

Other therapies have been attempted, a double-blind controlled study showed no significant difference in treatment of patients with globus symptoms using either a histamine H₂ receptor antagonist or placebo [33]. Conversely, in a recent pilot non-placebo-controlled study, the use of liquid alginate suspension has shown promising results for treating laryngopharyngeal reflux symptoms [34].

5.2. Life Style Modifications

Some lifestyle modifications have been suggested to help with gastroesophageal reflux and LPR.

Firstly, avoidance of certain foods can help. Citrus fruits, jams, jellies, tomatoes and some sauces such as barbeque sauce and salad dressings have pH below 4.6 and worsen reflux symptoms. Along with these, other foods such as curry, mustard and peppers can cause direct irritation and inflammation to the larynx [19]. Caffeine, alcohol, chocolate and peppermint all relax the oesophageal sphincters and increase reflux symptoms.

Behavioral advice, such as not eating large meals prior to exercise or going to bed can aid in symptom control. Physically raising the head of the bed with blocks to let gravity prevent reflux is often a good tool to help night time reflux.

5.3. Speech and Language Therapy (SLT)

There has been some investigation into the effectiveness of SLT in treating globus pharyngeus [35-37]. A recent paper reported good improvement in symptom scores following a treatment programme that included education, reassurance and the use of exercises. Numbers within the trial were, however, limited and the authors were unable to detect which part of their program specifically helped with symptoms. There were also no objective video-fluoroscopic changes following therapy [35].

Certainly, further research into the effectiveness of SLT in treating globus symptoms is desirable.

5.4. Goitre/Thyroid Mass

The presence of a goitre or thyroid mass is significant in the management of globus pharyngeus. Within a 2 year prospective trial investigating the relationship between thyroid pathology and globus symptoms; as many as one third of patients with a thyroid mass had globus symptoms. Following surgery, 80% saw resolution of their symptoms [38]. It has been questioned previously if thyroidectomy can actually cause globus symptoms. A recent survey of patients following thyroidectomy did not show any worsening of globus symptoms at 3 and 12 months but, in fact, showed improvement in these symptoms [39].

5.5. Severity Scoring and Monitoring

There have been two validated severity scoring tools available for use over the last 15 years. These are the Glasgow and Edinburgh Throat Scale [40] (GETS) and the Reflux Symptom Index (RSI) [41]. Both scales ask the patient to score specific symptoms in terms of severity and, overall, seem to detect similar symptom clusters [42]. Both scales can be used to monitor sym-

ptom progression or resolution. Another scoring system used is the Reflux Finding Score (RFS) which is an eight-item validated clinical severity scale used during endoscopic evaluation of the larynx that was introduced as a means of offering some standardization to the process of laryngopharyngeal reflux diagnosis [43].

Interestingly, in the recent survey of ENT consultant in the UK, 94% did not use popular scoring scales such as the reflux symptom index or the reflux finding score [29]. This finding raises questions regarding the application of these scoring scales in clinical practice.

6. Prognosis

A prospective study of 80 patients with globus pharyngeus demonstrated three independent factors that influenced prognosis significantly: gender, length of history at consultation and the presence or absence of throat symptoms [44]. Male patients having a history of the globus symptom for less than 3 months and not complaining of any associated throat symptoms had the best chance of becoming asymptomatic or symptomatically improved [44].

7. Conclusions

Despite being a difficult clinical entity to manage, there are treatment strategies available. The cause of globus pharyngeus is believed to be related to laryngopharyngeal reflux however this still remains controversial.

Investigations are of limited value in pure globus pharyngeus patients and should be reserved for those with atypical symptoms, signs or refractory cases with risk factors for more sinister pathology. Thorough history and examination, including fibre optic nasendoscopy, are key to a clinical diagnosis of this condition.

Treatment of reflux, if suspected, is essential and appropriate doses and regimes should be used in these cases. Reassurance and appropriate follow up are often enough to alleviate some patient concerns however the globus sensation itself, in the majority of patients, will persist.

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