ABSTRACT

OBJECTIVES: Globus pharyngeus has previously been linked to salivary hypofunction. We hypothesize that much of the globus experienced by patients is due to a drying effect secondary to anticholinergic medication use, and we aim to determine their association.

METHODS: A case-control study evaluating 270 patients presenting to a laryngology practice was conducted over a 6 month time period. All subjects rated globus sensation on a 5 point severity scale, with controls set at a score of 0. Subjects were excluded if they had a likely cause of globus such as structural anomaly (nodules or polyps), smoking, neck radiation, Sjogren’s, or recent surgery. Scores were then compared with subjects’ medication lists, comorbidities, age, and gender and evaluated using a multivariate analysis with significance set at p<0.05.

RESULTS: Any subject taking at least two anticholinergic medications has a 3.52 increased odds (p=0.02) of experiencing globus. Subjects taking a single anticholinergic medication did not have a higher odds of experiencing globus (OR 1.54, p=0.42). GERD was also significantly associated with globus (p=0.004) with an OR of 3.75.

CONCLUSIONS: This study suggests that much idiopathic globus is due to anticholinergic use, reflux, or a combination of the two. This is the first study to our knowledge that implicates medication use as a major risk factor for globus. An awareness of these associations is invaluable when attributing cause to, and considering treatment for globus.

INTRODUCTION

- Globus Pharyngeus is a non-painful sensation of a lump in the throat that is usually long-lasting and difficult to treat due to unclear etiology
- A recent survey showed that while 72% of otolaryngologists believed globus was due to LPR, the majority (57%) said that they were either occasionally successful or rarely successful in treating the condition
- Globus sensation has been strongly linked to salivary hypofunction. Furthermore, conservative management of xerostomia has been shown to significantly improve globus symptoms.
- We hypothesize that globus may be due to a drying effect secondary to anticholinergic medication use, and aimed to determine their association

METHODS AND MATERIALS

- Case-control study of 270 consecutive patients presenting to a tertiary care laryngology practice over a 6 month time period
- All subjects completed the Reflux Symptom Index, while the symptom of globus, or “lump in the throat”, was used as the primary endpoint. A score of 3 or greater indicated significant globus, while controls were set at a score of 0.
- Exclusion criteria: subjects with structural abnormalities such as polyps, nodules, granulomas or subglottic stenosis that may be causing chronic irritation; symptomatic reflux, professional voice overuse, current smoking status, prior neck radiation, Sjogren’s syndrome, recent laryngeal surgery or injection within the past month, or tracheotomy dependency. Of 270 patients surveyed, 120 met inclusion criteria.
- Globus scores were then compared with subjects’ medication lists, age, gender, and comorbidities and analyzed using a multivariate logistic regression model with Odds Ratios (OR). Significance was set at p<0.05

RESULTS

- Any subject taking at least one anticholinergic medication had a 1.54 increased odds (p=0.42) of experiencing globus. If a subject was taking 2 or more anticholinergic medications, those odds rose to 3.52 (p=0.02).
- Subjects with previously diagnosed GERD had a 3.75 increased odds of having globus (p=0.004)
- Gender nor Age were not significantly associated with globus (p values of 0.43 and 0.08) although older age trended towards significance
- Sinusitis and allergies were not significantly associated with globus (p values of 0.36 and 0.50 respectively), although it is worth noting that both of these had relatively low populations (n of 3 and 14, respectively)
- We also stratified medications according to class. However, there was no significant association between diuretics, sympathetics, or opioids as compared to globus (p values of 0.13, 0.20, and 0.48 respectively)

DISCUSSION

- The odds of having globus when taking two or more anticholinergic medications was 3.5 times that of a subject taking no anticholinergic drug, while subjects on one anticholinergic were not at increased risk of globus, although the association trended positively. This suggests a synergetic drying effect of subjects’ anticholinergic medications.
- Reflux has been suggested as a major etiology of globus, occurring in anywhere from 23% to 68% of patients, depending on the study. We also found a significant association between a previous diagnosis of GERD and globus. These subjects were likely patients with ‘silent reflux’ as we excluded anyone who had significant symptoms of heartburn or metallic taste in the mouth. Thus, silent reflux is strongly associated with globus according to our study.
- In assessing globus, we based our primary endpoint off of a simple 5-point scale, as taken from the Reflux Symptom Index (RSI). Our data was pooled from a previous study in which we analyzed laryngitis based off of the RSI.
- There are other limitations to this study that need to be further elucidated. As a cross-sectional study, we did not take into account previous PPI treatments as a potential outcome measure for globus, and may serve as a future avenue of investigation.

CONCLUSIONS

- This is the first study to our knowledge that implicates medication use (specifically, anticholinergic medications) as a major risk factor, and possible cause, of globus.
- The association with anticholinergic use suggests that much globus that does not have a clear etiology may be due to sicca, silent reflux, or a combination of the two.
- An awareness of these important associations is invaluable when attributing cause to globus and when considering treatment options within an otolaryngology practice.

REFERENCES

2. Globus surveys of otolaryngologists gathered at the 2013 American Academy of Otolaryngology meeting in Vancouver (results pending publication)