

## Original Article



# Assessment of Short-term Outcomes of 10 mg Daily Amitriptyline Therapy in Globus Pharyngeus Patients

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### Abstract

**Background:** Globus pharyngeus or feeling of a lump in the throat is a very common complaint in patients visiting the otolaryngology outpatient department. Pharmacotherapy with low dose amitriptyline has a significant effect in relieving the symptoms, although success rate varies among patients. **Objectives:** Aim for this study was to find out the benefits of low dose amitriptyline therapy in the management of Globus pharyngeus on a short term basis. **Materials & Methods:** This is an observational study conducted from Jan 2019 to Jan 2020. Total 50 patients were included in this study. Inclusion criteria were – subjective feeling of a lump in the throat persisting for more than 2 months, Clinical oral examination and Upper GI endoscopy revealed normal findings, age between 18–60 years of both sexes. All the patients were prescribed with 10mg Amitriptyline per oral at night for 2 months, and patients were followed during the course of treatment to assess relief of symptoms and to evaluate any side effects. **Results:** In this study male to female ratio was 1:4. Mean age of study group was 42.66 ( ± 4.78) years. Symptomatic relief occurred in 37 (74%) patients. Increased somnolence was found in 21 patients (42%) during first 2 weeks of treatment, No improvement occurred in 8 patients (16%), and worsening of symptom occurred in 5 patients (10%). **Conclusion:** Low dose Amitriptyline is effective in alleviating symptoms of globus pharyngeus in most patients on a short-term basis. Although some minor side effects can occur, these are manageable.

**Key words:** Globus pharyngeus, Lump in the throat, Cancer phobia, Functional swallowing disorders, HCR

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### Introduction

Globus pharyngeus is a persistent or intermittent non-painful sensation of a lump or foreign body in the throat. It is a well-defined condition that is usually long-lasting, difficult to treat, and has a tendency to recur. Swallowing improves this condition and it is generally not accompanied by dysphagia or odynophagia.<sup>1</sup> Globus is common and it accounts for approximately 4% of new referrals Otolaryngology department, and it is reported by up to 46% of apparently healthy individuals. The incidence is highest in the middle aged patients.<sup>2,3</sup> This condition can affect both men & women, but women seem to get more distressed over this condition and seek medical help commonly.<sup>4</sup> Previously, this condition was described as “globus hystericus” because of its frequent association with menopause or psychogenic factors.

However, Malcomson coined the more accurate term “globus pharyngeus” in 1968 after discovering that most patients experiencing globus did not have a hysterical personality.<sup>5</sup> The exact etiology and pathogenesis of globus is not known but multiple factors seem to be involved in the causation. Several studies have focused on gastroesophageal reflux disease (GERD), abnormalities of the upper esophageal sphincter (UES), and psychiatric disorders, and stress as major etiological factors for globus sensation. Amitriptyline is a tricyclic antidepressant with limited application due to the side effects caused by high doses (100 mg/d). In recent years, low-dose Amitriptyline has been shown to be well tolerated and significantly effective in improving the functional gastrointestinal disorders.<sup>6</sup> Aim for this study was to find out the efficacy of low dose Amitriptyline in the management of Globus pharyngeus.

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## Materials and Methods

This was an observational study to assess the short term outcome of low dose Amitriptyline in Globus pharyngeus patients and evaluate any potential side-effects. The study was conducted at the department of otolaryngology and Head-Neck surgery, Khwaja Yunus Ali Medical College Hospital, Enayetpur, Shirajganj from January 2019 to Jan 2020. Total 50 patients were included in this study. Inclusion criteria were - subjective feeling of a lump in the throat persisting for more than 2 months, Clinical oral examination and Upper GI endoscopy revealed normal findings, age between 18–60 years of both sexes. All the patient volunteered and informed written consent was taken from all patients. This study involved interviewing all patients (an/or his/her attendant) who participated. Detailed history was taken & oral examination was done. Relevant investigations including complete blood count, upper GI endoscopy & Chest X-ray PA view were done. Informed written consent was taken from the patient about his/her participation. All the patients were prescribed with 10mg Amitriptyline per oral at night for 2 months, and patients were followed up after the course of treatment. During the follow up visit, patients were inquired about the improvement of symptoms or occurrence of any side effects. All the information were recorded and analyzed using SPSS (Statistical Package for Social Sciences) version 21. The Chi-Square test was used to analyze the significance level of  $p < 0.05$ .

## Result

In this study 10(20%) of the study population were male and 40(80%) were female. Male: Female ration was 1:4

**Table I** – Sex distribution of the study group (n=50)

Sex	Number of Patients	Percentage (%)
Male	10	20
Female	40	80

5(10%) of the study population were in the age group of 18–30 years, 32 (64%) in 31–45 years and 13 (26%) between 46–65 years. Majority of the study population were in the age group of 31–45 years. Mean age was 42.66 ( 4.78) years.

**Table II** – Age distribution of the study group (n=50)

Age range	Number of Patients	Percentage (%)
18 – 30	5	10
31 – 45	32	64
46 – 65	13	26
Total	50	
Mean±SD	38.66 ( ± 4.78)	

Symptomatic relief occurred in 37 (74%) patients. No improvement occurred in 8 patients (16%), and worsening of symptom occurred in 5 patients (10%). Increased somnolence was found in 21 patients (42%).

**Table III** – Outcome of pharmacotherapy in the study group (n=50)

Outcome	Number of Patients	Percentage (%)
Improvement of symptoms	37	74
No Improvement of symptoms	8	16
Worsening of symptoms	5	10
Increased somnolence	21	42

**Table IV**– Comparison of patient status before and during treatment (n=50)

Age Range	Patients with Globus before Rx	Patients with subjective improvement	P value
18–30	5	3	0.007614
31–45	32	25	
46–65	13	9	

## Discussion

Globus pharyngeus is a common complaint among ENT patients. Although both men and women can be affected, the overwhelming majority of the patients are women. Among this patient demographic, perimenopausal or middle aged women are most commonly affected with rates being very low under 25 years. The patients present with a feeling of something stuck in the throat, that urges patient to swallow and even after repeated swallowing the feeling doesn't go away. In most patients, this feeling is usually absent during actual swallowing of food. To alleviate this, many patients tend to overeat, leading to weight gain. Although many factors have been attributed to the pathogenesis of globus, none of them succeeded in establishing a true cause and effect relationship. Among these factors – Gastro-esophageal reflux disease, abnormal tonicity of upper esophageal sphincter and psychological disturbance are most commonly implicated. Due to a clear lack of etiology, globus pharyngeus is widely considered to be a functional disease. And Amitriptyline have been commonly used in several gastro-intestinal functional disorders. But most patients can not tolerate the side effects of Amitriptyline at doses of 50 mg/d to 150 mg/d, resulting in discontinuation of medications and treatment failure. To the best of our knowledge, evidence supporting the possible effects of low-dose (10mg/d) Amitriptyline in patients with globus pharyngeus is rarely reported in scientific literature. Thus, in this study we wanted to evaluate what subjective improvement can be achieved with low dose Amitriptyline in patients with globus pharyngeus and what would be the side-effects of this approach.

In our study mean age was 42.66 ( 4.78) years. 5(10%) of the study population were in the age group of 18–30 years, 32 (64%) in 31–45 years and 13 patients (26%) were between 46–65 years. Majority of the study population were in the age group of 31–45 years. You et al<sup>7</sup> performed a very similar study, where the mean age of his group of patients were  $43.19 \pm 10.96$  years. Wilson et al.<sup>8</sup> published a study report where 47 patients had globus pharyngeus and mean age was 49 years. Moser et al<sup>9</sup> found median age of his study group to be 43 years. We found that majority of our patients were female, with the female: male ratio of 4:1. Although not this exaggerated, most studies report a female predominance in globus symptoms. 2:1 female predominance was reported by both

Thompson et al.<sup>10</sup>, & Drossman et al.<sup>3</sup> On the other hand a staggering 13:1 female predominance was reported by Penović et. al.<sup>11</sup>

In current study, we found that symptomatic relief occurred in 37 (74%) patients. No improvement occurred in 8 patients (16%), and subjective worsening of symptoms occurred in 5 patients (10%). Increased somnolence was found in 21 patients (42%). To compare our study with other studies of similar principles we found very few in recent publications. You L.Q. et al.<sup>9</sup> performed a similar study to assess the effect of low dose amitriptyline in globus, and showed a positive response rate of 75%. Zhou et. al.<sup>12</sup> tried to evaluate the effect of both paroxetine and amitriptyline together in the natural history of globus pharyngeus and stated symptom alleviation among most of the patients. We feel that the number of studies done in this aspect is very low. And based on these few studies it's still very early to have an universal recognition of positive effect of low dose amitriptyline for globus pharyngeus patients.

## Conclusion

After considering all the related variables and comparing them to other contemporary studies, we can conclude that – low dose amitriptyline can be very effective for globus pharyngeus symptoms in most patients on a short term basis. Other than increased somnolence in a subset of patients, this regimen is well tolerated. But future studies with larger group of patients should be considered for further evaluation of this treatment approach and also assess the long term outcome.

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