A new approach to non-organic globus sensation

P. G. C. Kooijman* and F. I. C. R. S. de Jong**

*University Medical Centre St Radboud Nijmegen, Nijmegen, The Netherlands; **UZ Leuven, Department of Oto-Rhino-Laryngology, Head and Neck, Leuven, Belgium

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Abstract. A new approach to non-organic globus sensation. The sensation of a lump or mass in the throat, the ‘globus sensation’, is a very common experience at some time for a large proportion of the population. Globus is a condition associated with a multitude of symptoms. In some cases the globus sensation can be related to organic problems as reflux, or neurological or systemic diseases. However, in many situations, no specific aetiology or physiological mechanism can be identified. In these functional globus complaints, we find more or less hypertonic muscle behaviour, such as cricopharyngeal spasm. Globus is often associated with upper oesophageal sphincter hypertension and abnormalities in UOS relaxation. In most cases, palpation of the laryngeal/perilaryngeal area shows many hypertonic muscles (e.g. inferior strap muscles, sternocleidomastoid muscles), lateral immobility of the larynx and diminished spaces between the structures. If the diagnosis confirms serious hypertonicity in the pharyngeal constrictors, treatment often consists of myotomy or botulinum injection. This paper describes a new approach for this hypertonicity of the laryngeal area: manual facilitation. In this approach, techniques from manual therapy will be used to achieve direct and quick relief of tension in muscles.

Introduction: definition, aetiology and assessment of globus

‘Globus sensation is the sensation of a lump or mass in the throat, unrelated to swallowing, when no mass is present’.1 This sensation is a common experience at some time in 45% of the population.1,2 Globus is a condition associated with a multitude of symptoms. It is best described as a constant feeling of a ‘lump in the throat’ or a fullness in the throat, mostly in the suprasternal or post-laryngeal region. No specific aetiology or physiological mechanism has been established. Some studies suggest that elevated cricopharyngeal (upper oesophageal sphincter) pressure or abnormal hypopharyngeal motility occur during the time of symptoms. Cricopharyngeal sphincter spasm is an important finding which must be looked for since it indicates hypertonicity as a cause for the globus sensation. Walvekar et al.3 found a significant association between hypertonicity of the upper oesophageal sphincter and globus. Patients often describe their complaints in the following ways: the lump varies depending on the day; symptoms usually increase during the day; stress aggravates the symptoms; saliva is difficult to swallow, but food isn’t; eating, in fact, often makes the tightness go away for a time. The disorder can make an individual reluctant to eat. The condition, however, may frequently be relieved by drinking or eating. It can be associated with hoarseness or a change in the voice. A clear definition, including criteria for the functional globus sensation, has been described by Galmiche et al.4 These criteria are listed in Table 1 and they are important for the purposes of decision-making relating to therapy.

A sensation of this kind can be caused by increased oesophagus sensitivity or hypertonic activity of the muscles. Globus sensation can also occur with the drying of the person’s throat caused by rapid breathing, anxiety, strong emotions, and with frequent swallowing. It can be associated with hoarseness or a change in the voice. Although not associated with stress factors or a specific psychiatric disorder, globus sensation may be a symptom of certain mood states; some patients may have a predisposition to this response. However, emotional explanations for this sensation should not be accepted until other causes have been investigated.

For the purposes of therapy selection, it is important to create a good diagnostic assessment. Is the case a ‘functional globus’, or are more organic problems involved? The diagnostic process essentially comprises a systematic elimination of other causes of such symptoms by means of a
complete ENT examination, including oesophagoscopy, and other tests, as well as re-assurance and counselling. In most of the cases, the aetiology still remains unclear.

Direct laryngoscopy, eventually followed by oesophagoscopy, should be performed on all patients, but the results are normal in 40% of cases. The globus sensation has been widely regarded as psychogenic, but organic disorders were found to be aetiologically significant. Recent studies suggest that gastro-oesophageal reflux disease (GERD) may be a major cause of globus sensation. Chavalier et al. investigated 20 patients to find relations between reflux and globus sensation. Fifteen patients complained of globus sensation only; five patients also complained of classical reflux symptoms. In this study, thirteen patients had pathologic reflux measurements. Although the aetiology of globus remains unclear, it has been attributed to a hypertensive upper oesophageal sphincter (UOS) resting pressure and to gastro-oesophageal reflux (GOR). A study by Corso et al. found a significant relation between hypertonicity of the UOS and globus. This study did not support GOR as an aetiological explanation of globus.

The diagnosis ‘functional globus’ is most likely if no clear organic reason can be found for the sensation. These cases will usually involve more or less hypertonicity of the laryngeal/perilaryngeal muscles. This hypertonicity can sometimes be demonstrated with barium swallowing. An indication of hypertonicity in the cricopharyngeal sphincter will be found in 60% of the cases. The question is whether this hypertonicity can only be treated with myotomy or botulinum injection. New techniques from manual therapy are available for the relaxation of the laryngeal area.

**Treatment**

Treatment options for isolated globus with UOS hypertension include empiric anti-reflux therapy, dilation of the UOS, cricopharyngeal myotomy, or injection of botulinum. Globus is often associated with UOS hypertension and abnormalities in UOS relaxation. Myotomy or injection of botulinum are frequently resorted to in these cases. In some cases conventional relaxation therapy by a speech therapist can be successful. However, the conventional relaxation therapy is a non-specific approach with general exercises with the aim of achieving relaxation. For some years now, a new approach – manual facilitation – is an option for functional globus but also for the compensatory behaviour of patients with organic globus sensation. It is a non-invasive treatment for the direct relaxation of tensed muscles.

**Manual facilitation**

Manual facilitation is a therapy that uses techniques from manual therapy. It is based on the idea of Proprioceptive Neuromuscular Facilitation. Stretching is a form of physical exercise in which a specific skeletal muscle (or muscle group) is deliberately elongated to its fullest length in order to improve the muscle’s felt elasticity and reaffirm comfortable muscle tone. The result is a feeling of increased muscle control, flexibility and range of motion. In general, it is worth noting that soft tissue, muscles and joints contribute to the symptomatic picture in direct and indirect form. Direct manifestation might present as: pain, tenderness, lumpiness and a difficulty in performing a physical task due to stiffness, loss of physical endurance and stamina. Less obvious manifestations are pain and tenderness, which radiate along neurological pathways away from the point of strain. A common presentation of a hyperfunction in the throat region will include symptoms like pain and tenderness (which may be diffused or focused in the throat region), recurrent sore throat, dryness, recurrent loss of voice, loss of stamina as the day wears on.
New approach of globus sensation

hoarseness, a globus sensation and difficulty in swallowing. Patients will point to a specific painful point, which will be very commonly sublaryngeal, or specifically at the thyro-hyoid space. The use of palpatory skills is an important part of the assessment.

Diagnostic assessment

In the diagnostic procedure, laryngeal/perilaryngeal muscles, the mobility of the laryngeal structures and changes in the ‘normal’ spaces between the structures are investigated. In this approach the chain of muscles from the masseter muscle to the inferior strap muscles are palpated. The assessment also includes the observation of body posture, and especially the neck and head position. Occasional feelings of tightness and globus at the level of the sternal notch can be traced back to a tight sterno-cleido-mastoid muscle, and/or hypertonic inferior strap muscles. It should be stated here that, while globus symptoms might be a manifestation of an emotional state of mind, they are expressed as physically tight muscles, which are very real for the patients.

A very tight base of the tongue and floor of the mouth are common findings, although pain and tenderness are less troublesome for patients in this area. Less obvious to the patient is their use or lack of use of the cricothyroid joint, the primary pitch control mechanism. This may be assessed by palpation for its resting position, dynamic range of movement, and tenderness of the cricothyroid muscles. It should be noted that we consider the vocal folds and its complex apparatus as an interdependent part of a complete mechanical system which includes the cricothyroid system, the thyrohyoid mechanism, the superior suspensory laryngeal muscles and other mechanical anatomical links. Upon palpation it is common to find increased pain and tenderness, decreased range of movement or a completely diminished thyrohyoid space and cricothyroid space.

A feeling of tightness may be due to lateral or anterior-posterior compression of the thyroarytenoids, hypertonic status of the constrictors, pharyngeal and aryepiglottic muscles. Upon palpation, the larynx is held tight, the internal laryngeal muscles are very tender to palpation and they feel hypertonic or hypertrophied. In case of hypertonic status of the constrictors, lateral movement of the thyroid cartilage is highly diminished. Palpatory examination has a much wider use than just the assessment of the quality of muscle and the range of movement of joints. The patient’s response to physical examination can be very revealing. It has to be borne in mind that many of the hypertonic muscle patterns around the larynx relate to problems in posture and head position.

Therapy by manual facilitation

Globus sensation or hypertonic patterns in the laryngeal region must be related to body posture, head and neck position. A failure to work at these items makes manipulation of the larynx pointless. When there is a globus sensation, the most important aim of the treatment is the relaxation of the cricothyroid muscles and the constrictor muscles. If patients with globus sensation point at the thyrohyoid mechanism, the main goal of therapy is the relaxation of this mechanism (Figure 1).

Stretching and lowering the larynx, releasing the thyrohyoid mechanism, articulating a locked cricothyroid joint, and stretching the inferior strap muscles are all procedures designed to achieve a much more relaxed, lowered and flexible larynx. If radiological investigations like barium swallow demonstrate a hypertonic cricopharyngeal constrictor, a direct approach to these constrictors is possible (Figure 2). The relaxation of the constrictors requires a deliberate and careful approach.

If a simple functional globus sensation is present, the tech-
niques described will mostly result in quick and successful symptom relief. Relief will be partial only if the globus is caused by an organic disease with hypertonic compensation.

Discussion and conclusions

Globus sensation is a very common entity and has a characteristic presentation. In many cases, there are organic causes. Traditionally, the functional globus has been treated by convincing the patient that there is nothing serious going on. When the cause is hypertonic constrictor muscles, myotomy and botulinum injection are very common treatments. Although no data is available for effect measurements, manual therapy seems to be a very welcome new approach for this kind of problem. The benefit of this approach is the fact that manual facilitation is a non-invasive relaxation technique. During the therapy, direct feedback is possible and this contributes to a quick and mostly stable relief of the complaints. Normally, patients will improve to such an extent after 6 to 8 sessions that no further treatment is necessary.

Further research is required into the types of globus that can be treated with this approach. Further suggestions for research are: effect studies about therapy in globus between myotomy, botulinum injection and manual facilitation.

References


Figure 2
Stretching pharyngeal/cricopharyngeal constrictors on the left side by rotating the thyroid cartilage (demonstration with model and on subject).