

## Short Communication

# The modified Valsalva manoeuvre to improve visualization of the hypopharynx during flexible nasopharyngoscopy

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### Abstract

A simple, safe and effective procedure for improving the diagnostic accuracy of nasopharyngoscopy is described. It is most useful for the exposure of the hypopharynx, especially in the elderly patient.

**Key words:** Endoscopy; Hypopharynx; Valsalva manoeuvre

### Introduction

The clinical role and economic value of flexible nasopharyngoscopy in outpatient departments has been well established since its introduction over 20 years ago (Silberman *et al.*, 1976; Welch, 1982; Lancer and Jones, 1985).

Since then, the role has been extended to include: (i) sleep nasendoscopy together with the Mueller manoeuvre for the assessment of patients with sleep apnoea and snoring (Sher *et al.*, 1985; Croft and Pringle, 1991); (ii) milk nasendoscopy for the assessment of patients with dysphagia and aspiration (Wilson *et al.*, 1992); (iii) evaluation of vocal folds with both white and stroboscopic illumination; (iv) inspection and procedures in the nasal fossae and post-nasal space; (v) an incorporated biopsy channel for the location and retrieval of fish bones and other foreign bodies (Choy *et al.*, 1992); (vi) guidance during emergency endotracheal intubation under local anaesthetic (Wei *et al.*, 1988); and (vii) for difficult nasogastric intubation.

Nasopharyngoscopy is also an excellent teaching facility and allows video or still photographic documentation (Lancer, 1986).

The original description of nasendoscopy (Silberman *et al.*, 1976) outlined the disadvantages, one of which was the limitation of the view of the lower parts of the pyriform fossae and the postcricoid region of the hypopharynx.

We describe a simple modification which significantly improves the view during nasopharyngoscopy. This is commonly practiced in North America but virtually unknown in ENT practice in this country.

### Technique

Topical anaesthesia is applied to the nasal fossae and the pharynx. The patient sits upright in a chair facing the examiner and instructions for the procedure are given to the patient before the introduction of the nasopharyngoscope.

The tip of the endoscope is then positioned above the

inlet of the larynx and the nose is squeezed gently by the fingers of the examiner's left hand. The patient is then asked to blow hard through the obstructed nose with the mouth closed (the modified Mueller manoeuvre). The resultant raised intrapharyngeal pressure expands the pharynx by stretching the underlying pharyngeal musculature. The ballooning of the pyriform fossae and posterior pharyngeal wall not only allows a more accurate assessment of the stretched pharyngeal mucosa but also gives a view of the postcricoid region, pyriform fossae and posterior pharyngeal wall below the level of the arytenoid cartilages.

This technique is particularly effective in the elderly whose pharyngeal tissues are lax and pharyngeal mucosa atrophic.

### Discussion

This procedure has been used extensively for the investigation of patients with globus symptoms when exclusion of hypopharyngeal pathology cannot be made on mirror examination or simple nasopharyngoscopy alone. It is also useful in the outpatient setting for the investigation of patients with suspected pharyngeal foreign bodies. It should not be employed in the presence of a serious penetrating pharyngeal injury, laceration, or following pharyngeal repair due to the potential for forcing air or contaminated secretions into the parapharyngeal space.

It should be considered as a procedure which aids the diagnostic effectiveness of nasendoscopy but not as a replacement for radiological investigation or direct laryngoscopy under a general anaesthetic if the clinical situation warrants it. It in no way replaces the need for thorough examination and biopsy of pharyngeal tumours under general anaesthetic for accurate tumour staging.

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