

## Topical anaesthesia before nasendoscopy: a randomized controlled trial of co-phenylcaine compared with lignocaine

Douglas, R., Hawke, L., & Wormald, P.-J.

*Department of Surgery, Otolaryngology Head and Neck Surgery, Adelaide and Flinders Universities, Woodville South, SA, Australia*

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**Objective:** To evaluate the relative effectiveness of co-phenylcaine (lignocaine 5% with phenylephrine) and lignocaine 5% sprays when administered prior to rigid nasendoscopy.

**Design:** Randomized, double blind controlled study.

**Setting:** Teaching hospital otolaryngology unit.

**Participants:** Thirty patients requiring routine outpatient rigid nasendoscopy were administered five puffs of either co-phenylcaine or lignocaine 5% spray which had been randomly assigned to either the first or the second visit. Ten minutes later nasendoscopy was performed. Immediately after nasendoscopy the ease of performance of the procedure and the quality of the view achieved was rated on a visual analogue scale by the endoscopist and the patients recorded the level of pain experienced on a visual analogue scale. Two weeks later, the patients returned for a repeat nasendoscopy, receiving the alternate spray.

**Main outcomes measures:** Ease of performance and quality of view of achieved by endoscopists and pain experienced by patients, both measured with visual analogue scales.

**Results:** The ease of passage of the endoscope and quality of the view obtained was found to be greater after the administration of co-phenylcaine [visual analogue scores 84 (95% CI: 80–89) than after lignocaine and 77 (95% CI: 73–81) ( $P < 0.01$ )]. The two sprays produced similar levels of topical anaesthesia.

**Conclusions:** Nasendoscopy can be performed with minimal discomfort after the administration of either co-phenylcaine or lignocaine 5% sprays. The vasoconstricting action of co-phenylcaine increases the ease of passage of the endoscope and quality of the view obtained by the endoscopist.

Rigid and flexible upper airway endoscopy have become routine office procedures in the practice of otolaryngology. Because of the sensitivity of the nasal mucosa it is common practice for this procedure to be performed after the application of topical anaesthesia. Several studies have compared the efficacy of different topical agents used during outpatient nasendoscopy performed with either rigid or flexible nasendoscopes.<sup>1–3</sup> These studies have not found any difference between the efficacy of cocaine, lignocaine and co-phenylcaine (lignocaine 5% and phenylephrine 0.5% in combination) regarding either the discomfort experienced by the patient or the ease of obtaining an adequate view. Three studies have compared local anaesthetic sprays with either normal saline,<sup>4</sup> normal saline and no spray,<sup>5</sup> or xylometazoline and no spray.<sup>6</sup>

None found that local anaesthetic spray reduced the level of pain experienced by the patient but rather that the bitter taste of lignocaine increased the overall unpleasantness of the experience. However, none of the above studies used the manufacturer of co-phenylcaine's recommended dose of five sprays to each nostril and so an effective level of topical anaesthesia may not have been achieved. The aim of this study was to compare the efficacy of co-phenylcaine spray when used at its recommended dose with an equivalent dose of lignocaine spray.

### Methods

#### Patients

Patients attending the otolaryngology outpatient clinic at The Queen Elizabeth Hospital who required upper airway endoscopy as part of their normal examination were invited by a research assistant to participate in this study. Recruitment occurred from October 2004 to February

Correspondence: Peter-John Wormald, Otolaryngology Head and Neck Surgery, The Queen Elizabeth Hospital, Woodville South, SA 5011, Australia, Tel.: (08) 8222 7538; fax: (08) 8222 7419; e-mail: peterj.wormald@adelaide.edu.au