

Timing of co-phenylcaine administration before rigid nasendoscopy: a randomized, controlled trial

D D POTHIER, C E J HALL, S GILLETT, P NANKIVELL

Abstract

Rigid nasendoscopy is a commonly used method of examining the nasal cavity and postnasal space. Co-phenylcaine is useful for its vasoconstrictive and anaesthetic properties, but the length of time allowed for it to take effect is variable. We performed a single-blind, randomized, controlled trial to determine whether it was better to allow one or 10 minutes for co-phenylcaine to take effect. Fifty patients were randomized into two groups, 25 in each. Patients in the 10 minute group experienced less discomfort ($p = 0.02$) and less pain ($p = 0.018$) than those in the one minute group. Ease of examination was also greater in the 10 minute group, as was the quality of the image obtained ($p < 0.001$).

Key words: Nasal Cavity; Anaesthetics, Local; Endoscopy

Introduction

Nasendoscopy in the out-patient department has revolutionized the examination of the nasal cavity and postnasal space. A flexible nasendoscope may be used to examine the nasal cavity, but it has been shown that a rigid nasendoscope is a more effective instrument for this purpose.¹ Various studies have discussed the relative merits of topical anaesthetic agents used prior to rigid and flexible nasendoscopy, as well as the use of vasoconstrictor agents; it has been shown that topical anaesthetics are not necessary for flexible nasendoscopy^{2,3} but are of value for rigid nasendoscopy, as are vasoconstrictors.⁴

Co-phenylcaine (lignocaine and phenylephrine) increases the quality of the nasal cavity examination as well as improving the experience for the patient, but practice varies as to how long before rigid nasendoscopy the co-phenylcaine should be applied. It is possible that leaving inadequate time between the application of the preparation and the nasendoscopy may not be as beneficial as waiting for the preparation to take full effect; conversely, this extra time may be wasted if the preparation works quickly. In the context of nasendoscopy, little data exist on co-phenylcaine's speed of effect.

Null hypothesis

Our null hypothesis proposed that the timing of the application of co-phenylcaine before rigid nasendoscopy has no effect on the following: levels

of discomfort or pain experienced by the patient; quality of the image seen during nasendoscopy; and ease with which the nasendoscope is passed.

Methods

A prospective, single-blind, randomized, controlled trial was designed.

Participants

Fifty consecutive patients were recruited between 1 December 2005 and 30 January 2006. They were all attendees at the otolaryngology out-patient clinic at the Royal United Hospital, Bath.

Criteria for inclusion were: adults who required a full endoscopy of both nasal cavities and the postnasal space as part of their examination; and patients in whom informed consent could be obtained. All patients with gross nasal polyposis were excluded as a full nasendoscopy would not have been possible. Recruited patients were taken to a separate room and kept there for 15 minutes by an investigator who was not involved with the examination of the patient; here, they received co-phenylcaine applied either one minute (group one) or 10 minutes (group two) before returning to the examining investigator.

The examination was then performed with a Richards 4 mm rigid endoscope (Gyrus Group, Reading, UK) using a portable light source (GVR Products, Stoke-on-Trent, UK).