

Short Communications

Maxillary antral lavage using inferior meatal cannula anaesthesia

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Abstract

Antral puncture and lavage through the inferior meatus is a minor but common otolaryngological procedure, usually performed under local anaesthesia. We describe a new method of introducing local anaesthetic into the inferior meatus, via the use of a soft intravenous cannula connected to a syringe containing 10 per cent cocaine paste. We have called this new technique inferior meatal cannula anaesthesia (IMCA).

Key words: Maxillary sinus; Irrigation; Anaesthesia, local

Introduction

Antral lavage is often carried out as a day-case procedure under local anaesthesia and can be performed in the ENT outpatient department. The maxillary antrum is usually punctured via the inferior meatus and anaesthesia of the lateral wall of the nose obtained by placing the anaesthetic agent in contact with the nasal mucous membrane. The most widely used anaesthetic agent is cocaine because of its dual effects of anaesthesia and vasoconstriction. However serious side-effects and even death have been reported with cocaine (Feehan and Mancusi-Ungaro, 1976) and it is vitally important that the recommended dose is not exceeded. Other agents such as lignocaine have been used in intranasal procedures, but studies have shown that cocaine appears to be associated with less pain in the majority of patients (Jonathan and Violaris, 1988). In the past, anaesthesia for antral washout has been obtained by placing cocaine paste or solution onto cotton tipped silver wire probes and inserting these into the inferior meatus of the nose. An alternative method via surface infiltration of the lateral wall of the inferior meatus using a dental syringe has been described (Gibb *et al.*, 1968). However, patients dislike having the probes placed into the nose and

achieving adequate anaesthesia, particularly by surface infiltration can be an uncomfortable experience. The new technique of inferior meatal cannula anaesthesia appears well tolerated and is a safe procedure, as an accurate dose of anaesthetic agent can be applied.

Method

A soft intravenous 16 gauge cannula is connected to a 2 ml disposable syringe (Figure 1) containing 1.5 mg/kg of 10 per cent cocaine paste (1 ml of 10 per cent paste is equivalent to 100 mg). This represents the maximum safe adult dose (British National Formulary, 1996). A diagonal cut is made in the tip of the cannula so that the cocaine paste is directed laterally on depression of the plunger of the syringe. The cannula is placed under the inferior turbinate into the inferior meatus as far posteriorly as possible, usually a distance of 4–5 cm. As the cannula and syringe are moved anteriorly, the cocaine paste is positioned adjacent to the lateral wall of the nose by

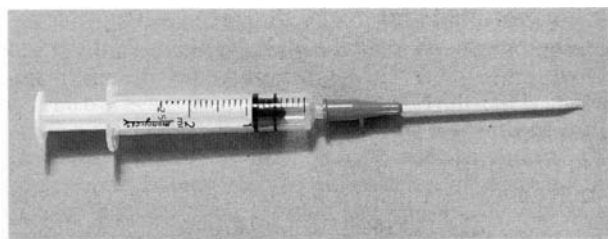


FIG. 1

Two ml syringe connected to 16 gauge intravenous cannula with modified distal end.

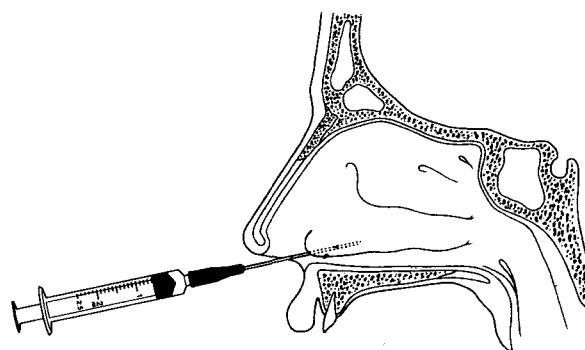


FIG. 2

Cannula placed into inferior meatus for administration of cocaine paste.

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depression of the plunger (Figure 2). If a bilateral procedure is to be performed, half of the contents of the syringe must be placed in each side, so as not to exceed the recommended dose. Antral puncture and washout are performed approximately 15–20 minutes after application of the local anaesthetic.

Discussion

Cocaine has traditionally been used as a topical intranasal agent because of its dual effect of anaesthesia and vasoconstriction. It is particularly useful in antral lavage where good local anaesthesia decreases the discomfort experienced by the patient and vasoconstriction reduces the amount of nasal secretion, decreases the likelihood of bleeding and improves access to the inferior meatus.

Previous methods of administration of the local anaesthetic agent have led to various degrees of discomfort. In a study by Paulose *et al.* 1989, 96.4 per cent of patients experienced pain or discomfort while the local anaesthetic agent was being injected and 80.7 per cent experienced pain or discomfort with the placement of intranasal probes.

Subjective observations of inferior meatal cannula anaesthesia for antral washout indicate this new form of delivery of local anaesthesia into the inferior meatus is well tolerated by the patient. The method of administration produces very little in the way of discomfort and if the nose is sprayed with lignocaine prior to the insertion of the cannula, it can be virtually pain free. It also produces effective anaesthesia and an accurate dose of cocaine can

be given. A prospective study to evaluate the relative efficacy of inferior meatal cannula anaesthesia in comparison to the more conventional methods is planned for the future.

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