

‘A parent’s kiss’: evaluating an unusual method for removing nasal foreign bodies in children

MARISSA BOTMA, F.R.C.S., ROXANA BADER, M.B. CH.B.,*
HAYTHAM KUBBA, M.PHIL., F.R.C.S.(ED), F.R.C.S.

Abstract

Nasal foreign bodies are a common problem in children. Various techniques have been described for removing the offending articles. Positive pressure techniques have long been described, and have many potential advantages, but are not yet in widespread use. The aim of this study was to evaluate the efficacy, safety and acceptability of a technique of mouth-to-mouth blowing. Of 19 children with intranasal foreign bodies, the technique was successful in 15 (79 per cent). The procedure caused little or no distress to the child, and no complications were encountered. All parents found the technique acceptable. This technique for nasal foreign body removal is, as far as we are aware, the first to be subjected to any prospective evaluation of effectiveness. We suggest that it should be used as the first line management for removing nasal foreign bodies in young children.

Key words: Nasal Cavity; Foreign Bodies; Children

Introduction

Nasal foreign bodies are common in young children, and their removal can be challenging. Various techniques have been described, including the use of forceps, balloon catheters, suction, probes and cyanoacrylate glue.^{1,2} All these techniques require that the child be physically restrained, unless unusually co-operative. This can lead to considerable anxiety in both parent and child, that may cause problems with future visits to the hospital or family doctor. Traumatic injuries to the nasal mucosa may also occur.

Various positive pressure techniques have been described in the literature. The simplest is to ask the child to blow their nose while occluding the unaffected side of the nose. This is only really practical in the older child.³ Another technique described involves the application of a self-inflating anaesthetic bag and mask over the child’s mouth.^{4,5} Physical restraint is usually required, and the procedure can appear very threatening to a young child. One technique has been described where the doctor blows into the child’s mouth through a gauze swab: this can also be a frightening experience for the child and, again, requires restraint.⁶ In addition, there is a theoretical risk of disease transmission between doctor and patient.

The technique used in this study was first described in 1965, and was credited to a Dr Ctibor.⁶ The method has been sporadically mentioned in the literature since then, but has yet to gain wide acceptance.^{7–9} The procedure has never been subjected to any formal appraisal, but is said to be easy and safe, requiring no instrumentation or restraint, and causing little or no distress for the child.¹⁰ The theoretical complications of barotrauma to the tympanic membranes and lungs have not been reported, and if the procedure is performed by a parent there is minimal chance of transmission of disease.^{4,5}

The aim of this study was to determine the efficacy, safety and acceptability of the mouth-blowing technique for removing nasal foreign bodies in children, by means of a prospective observational study.

Methods

Consent for participation was sought from the parents of a consecutive series of children presenting to our Accident and Emergency department with a unilateral nasal foreign body.

The procedure was explained to the parents, and then performed by one of them under the supervision of the attending doctor. The child was allowed to sit or stand according to their own preference, and no restraint of any kind was used. The parent was



FIG. 1

A mother and child demonstrating the mouth-blowing technique.

instructed to make a firm seal with their mouth over the child's open mouth, then give a short, sharp puff of air into the child's mouth. The unaffected side of the nose was occluded with a thumb throughout the procedure (Figure 1). The foreign body was usually forcibly expelled onto the cheek of the parent. The child's co-operation was gained by telling them that the parent was going to 'give them a big kiss'. Failure with the initial attempt occasionally required an adjustment in position, and sometimes more than one attempt was needed to dislodge a firmly impacted foreign body.

The data collected were age, sex, type of foreign body, visibility of foreign body, time since foreign body insertion, previous attempts at removal, success or failure of mouth-blowing, child's distress, mother's reaction and complications.

Results

Nineteen patients were included in the study (12 boys, seven girls). Consent was obtained in all cases, and none refused to participate. The median age was 24 months (range 12–60 months). The types of foreign body encountered are summarized in Table I. All foreign bodies were visible on anterior rhinoscopy. The median time since insertion of the foreign body was four hours (range one hour to two weeks). In 10 children, a previous attempt at instrumental removal, either by a parent or the family doctor, had failed.

In 15 (79 per cent) children the technique was successful. None of the children showed signs of distress, such as crying. All parents thought that the

TABLE I
THE FOREIGN BODIES ENCOUNTERED IN OUR SERIES

Foreign body	Number seen	Removed by mouth-blowing
Vegetable matter	6	6
Sponge	4	3
Bead	3	2
Button	2	1
Pebble	2	2
Tissue paper	1	1
Magnet	1	0

TABLE II

SUCCESS OF THE MOUTH BLOWING TECHNIQUE, AND ITS RELATIONSHIP TO AGE OF THE CHILD, AND TIME SINCE INSERTION OF THE FOREIGN BODY (DIFFERENCES IN PROPORTIONS NOT STATISTICALLY SIGNIFICANT USING CHI-SQUARED TEST)

	Successful	Failed
Age 2 or less	7	2
Age >2	8	2
Present 12 hours or less	11	1
Present more than 12 hours	4	3
Total	15	4

technique was acceptable. Most expressed surprise and amusement at this unconventional technique, but without exception, all felt that it was preferable to instrumentation or restraint. Even parents of children in whom the technique was not successful were positive in their comments about it. All parents felt that, in future, should the problem recur, they would be happy to perform the mouth-blowing technique before seeking medical attention.

There were no complications. We were unable to identify any factors which predicted failure, such as time since insertion, age of the child, or nature of the foreign body (Tables I and II). Foreign bodies not successfully removed by mouth-blowing were removed by instrumental means, and co-operation with these further attempts was not compromised by the initial mouth-blowing procedure.

Discussion

Nasal foreign bodies are usually self-inflicted, and are most commonly found in children aged between two and five years.¹ They are a reflection of the child's natural curiosity and desire to explore their body cavities.¹¹ Although not usually life-threatening, there is an associated morbidity from epistaxis, purulent rhinorrhoea and, rarely, aspiration into the tracheobronchial tree.¹¹

This study is small, but is nonetheless the only attempt so far to determine the efficacy of any method for removal of nasal foreign bodies. We found this technique to be easy to perform, and acceptable to parents and children. Those whose child had also undergone attempts at instrumental removal of the foreign body were most positive about the technique. The technique was successful in the large majority of cases, without any complications or distress for the child, even for objects which had been present in the nose for up to 10 days. Importantly, failure of mouth-blowing does not preclude the use of instrumental techniques, as the child remains co-operative.

We feel that this technique has numerous advantages, is safe and effective, and should be used as the first line management of intranasal foreign bodies in children.

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Address for correspondence:

Mr H. Kubba,
Department of Otolaryngology–Head and Neck Surgery,
Monklands General Hospital,
Airdrie, ML6 0JS,
UK.

Fax: +44(0) 1236 760015

E-mail: haytham@kubba.netlineuk.net

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