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Paediatric epistaxis: Alder Hey experience

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Abstract

Referrals for epistaxis management constitute a significant proportion of paediatric ENT consultations. A prospective audit of all new referrals to our paediatric ENT department for epistaxis management yielded 88 patients over four months. Parents completed a questionnaire with particular reference to the duration of history and frequency of epistaxis. After assessment some patients were given topical chlorhexidine and neomycin cream (Naseptin), in addition some children also underwent chemical cautery (silver nitrate). Of the 64 children in whom out-patient nasal cautery was attempted it was tolerated by 63 (98 per cent). In response to a follow-up postal questionnaire returned by 65 per cent, most parents (74 per cent) felt that Naseptin was useful. A telephone survey of the patients' general practitioners found that 91 per cent of the children did not consult their general practitioner regarding epistaxis again. We conclude that paediatric epistaxis can be effectively managed with a single out-patient consultation.

Key words: Epistaxis; Treatment; Cautery; Anti-infective Agents; Local

Introduction

Epistaxis is common in childhood. It is rarely severe and seldom requires hospital admission in contrast to the adult population. Epistaxis in children is commonly managed with nasal cautery usually with silver nitrate.[1] No previous studies have documented how well paediatric patients tolerate cautery. This study looks at parental satisfaction with treatment with cautery and antiseptic nasal cream. An assessment of the impact of ENT out-patient management on the general practitioner workload was also carried out.

Method

A four-month prospective audit of all new patients referred to the ENT out-patient department at a large paediatric hospital (Alder Hey Children's Hospital) for the management of epistaxis was carried out. The maximum age of patients was 16 years.

Prior to medical assessment parents or guardians were asked to complete a questionnaire in the waiting room (Appendix 1). Details of medical management were recorded. No attempt was made to influence the clinician's management. During the study the clinicians seeing patients consisted of two consultants, two specialist registrars, and one senior house officer. Patients who required nasal cautery with silver nitrate had local anaesthesia induced at the site of cautery by application of cotton wool soaked in 10 per cent lignocaine solution for 10 minutes. Some patients were given Naseptin cream (chlorhexidine hydrochloride 0.1 per cent, neomycin sulphate 3250 units/g) to be applied topically to the nasal vestibule three times daily for two weeks.

Three to four months after the initial consultation parents were sent an anonymous postal questionnaire (Appendix 2) with a reply paid envelope enclosed. Approximately six months after the initial consultation patients' general practitionres were contacted by telephone to ascertain whether patients had required further general practitioner consultation for epistaxis.

Results

During the study period there were 88 new referrals for epistaxis (out of a total of 1023 new referrals to ENT). Of these, 52 were boys and 36 were girls. The age range was two to 16 years (mean 8.7) (Figure 1).

Twenty-seven (31 per cent) of the parents felt their child had had problems with bleeding from one nostril only. Fifty-two (59 per cent) thought that bleeding had occurred from both nostrils (not necessarily at the same time). Nine (10 per cent) either did not know or did not respond. Most, 62 (70 per cent) of parents felt their child had suffered from epistaxis for more than one year (Figure 2). Seventy-six (86 per cent) of parents felt epistaxis had occurred at night (as evidenced by seeing blood on the bedsheets on wakening). Daytime epistaxes were noted in 74 (84 per cent). Epistaxis was noted in 17 (19 per cent) of the children in association with a

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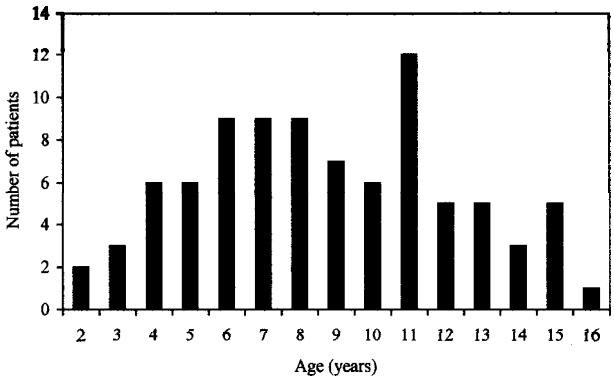

FIG. 1

Age distribution of patients attending ENT outpatients for management of epistaxis.

cold. A similar number of children had epistaxis after blowing their nose. Most children 79 (90 per cent) continued to suffer with episodes of epistaxis whilst waiting for their ENT appointment (Figure 3). Vessels on Little's area were noted on examination of 61 (69 per cent) of the children. Only 11 (13 per cent) had an entirely normal examination (Figure 4).

In 85 of the children no specific underlying cause for epistaxis could be demonstrated. Three children had epistaxis related to blood dyscrasias. One nine-year-old girl regularly attended the Haemophiliac clinic for mild Von Willebrand's disease. She underwent cautery in the ENT clinic and was re-admitted later that day with epistaxis. This settled without nasal packing but she was given a Factor VIII transfusion before discharge the next day. Another six-year-old girl who had prominent vessels visible on Little's area had cautery deferred as she was awaiting an appointment in the Haematology clinic the following month. There was a family history of Von Willebrand's disease. The third patient, a 16-year-old boy, was under the care of the paediatric oncologists for a rhabdomyosarcoma. He was undergoing chemotherapy and had a platelet count of 58×10^9/l. He had been cauterized once previously and underwent right nasal cautery uneventfully. In view of his history, a follow-up appointment was arranged for two months later.

All patients and parents were given advice regarding first aid treatment for epistaxis. Medical management for 63 (72 per cent) of the children consisted of nasal cautery and antiseptic nasal cream.

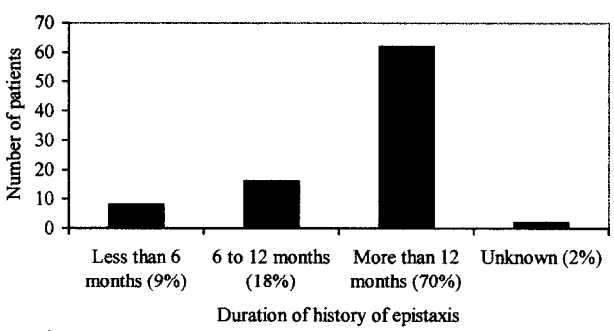

FIG. 2

Duration of history of epistaxis prior to attendance at ENT out-patient clinic.

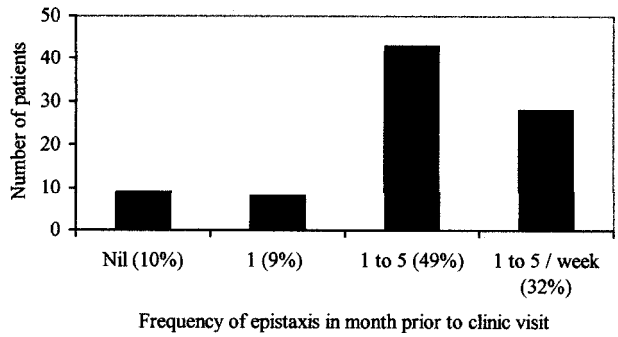

FIG. 3

Frequency of epistaxis in the month prior to out-patient attendance.

Roughly a quarter (21) received antiseptic nasal cream alone (Figure 5). More than half the children 47 (53 per cent) were discharged whilst 40 (45 per cent) were scheduled for review and one was listed for cautery under general anaesthesia.

The postal questionnaire had a 65 per cent response rate (57 out of 88 questionnaires). Of those who responded, 21 (37 per cent) said that their child no longer had nosebleeds. Of the parents who said that epistaxis continued, 27 of 33 (82 per cent) felt there were fewer episodes. Three parents who stated that the nosebleeds continued did not comment if the frequency was the same or less. Overall 48 of 54 (89 per cent) felt that their child had improved after their ENT out-patient visit(s). Most (39 of the 53, 74 per cent) parents who commented, felt the antiseptic cream had been useful. The general practitioner telephone survey yielded 77 (out of 88) successful contacts (88 per cent). Following their visit to the otolaryngology department 70 of the 77 (91 per cent) children had no further visits to their general practitioner for epistaxis. A few children, six of 77 (eight per cent), returned to their doctor's surgery because of epistaxis. One child returned to the surgery but the general practitioner could not specify if this visit was related to epistaxis.

Discussion

Epistaxis is a common medical problem affecting around 10 per cent of the population.[1] In a study of 1218 children in the 11–14 age group it was found

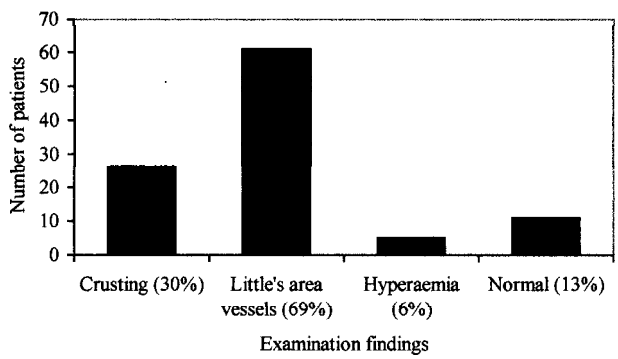

FIG. 4

Clinical findings on nasal examination at out-patient attendance.

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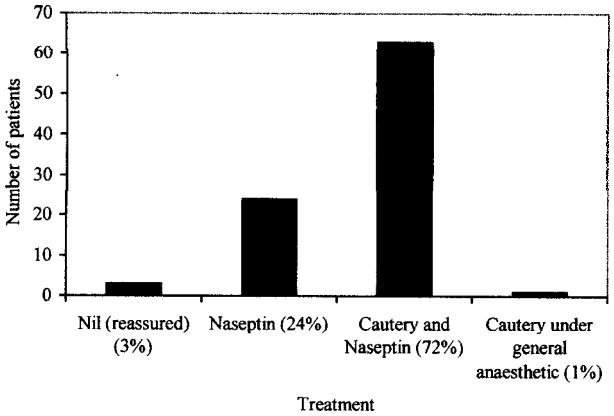

FIG. 5
Distribution of treatments used in management of epistaxis.

that about nine per cent suffered with epistaxis.[2] Standard out-patient treatment of paediatric epistaxis consists of cautery, usually with silver nitrate, to prominent vessels or bleeding points.[1] In the short term cautery promotes clotting within vessels, in the longer term it causes sclerosis of vessels. Ruddy *et al.*[3] have suggested that antiseptic nasal cream is as effective as silver nitrate cautery in children. Murthy *et al.*[4] felt that cautery in addition to antiseptic nasal cream added no benefit over antiseptic nasal cream alone. Antiseptic nasal creams act by reducing crusting and vestibulitis.

We have shown that three quarters of parents felt that antiseptic nasal cream is helpful in the treatment of epistaxes. This, of course, is a subjective parental view as our anonymous parental questionnaire data does not enable us to differentiate between parents of the 24 per cent of patients who had antiseptic nasal cream alone and those of the 72 per cent who had antiseptic cream and cautery. Parental satisfaction with antiseptic creams for epistaxis has not previously been reported. In children nose-picking may aggravate or cause epistaxis, a barrier cream, the simplest being Vaseline, if applied around the vestibule may act as a deterrent to nose-picking. Antiseptic nasal cream has the added advantage of treating vestibulitis. General practitioners should be encouraged to give appropriate first aid advice and to prescribe antiseptic nasal cream as the first line treatment for paediatric epistaxes, with referral for specialist management being reserved for patients in whom this fails.

Although treatment of epistaxis with antiseptic cream or cautery is often successful many patients are reviewed in out-patients. Eighty-nine per cent of our patients were improved after one clinic visit and 91 per cent did not visit their general practitioner because of epistaxes in the six months following ENT consultation. This suggests that paediatric epistaxis can be managed with a single out-patient consultation.

Sixty-three of 64 children in whom cautery under local anaesthesia was attempted tolerated it, including two three-year-olds. Only one two-year-old refused cautery and was listed for cautery under general anaesthesia. Many centres now use Cophenylcaine (lidocaine hydrochloride five per cent and phenlyephrine hydrochloride 0.5 per cent) spray for local anaesthesia prior to nasal cautery as it stings less than lignocaine when sprayed into the nose. At the time of the study cophenylcaine was not readily available. We feel lignocaine was well tolerated (in this study) because our method is to apply it onto cotton wool and insert this into the nostril(s) for 10 minutes, then cauterize. We find that children readily tolerate this method of application of local anaesthetic to the nose and it seems to be less intimidating and uncomfortable than spray application.

Conclusion

The majority of paediatric epistaxes are simply managed with a single out-patient consultation. Antiseptic nasal cream, which parents find helpful, should probably be the first line of treatment. If cautery with silver nitrate is felt to be necessary it is tolerated well even by very young children.

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Mr Z. Makura takes responsibility for the integrity of the content of the paper.
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Appendix 1

QUESTIONNAIRE
(To be filled out by parent/guardian, etc)

I am (circle one below)
MOTHER
FATHER
OTHER (STATE) .....

1 **How long has your child had nose bleeds?**
State specifically if known
.....
or, tick one below
Less than 6 months
6–12 months
More than a year

2 **Which side does your child bleed from?** (Tick one)
Left Nostril
Right Nostril
Both Nostrils
Don't Know

3 **When do the nose bleeds occur? (Tick one or more)**
At night (blood on bedsheets on wakening)
During the day
When the child has a cold
When child blows his nose

4 **How many nose bleeds has your child had during the last month?**
Nil
1 in the last month
1–5 in the last month
1–5 per week

5 **Does your child take any regular medication**
Yes
No
If yes, please state .....

6 **Is your child followed up at Alder Hey for any other medical condition?**
Yes
No
If yes, please state .....

Appendix 2

FOLLOW UP QUESTIONNAIRE
(To be completed by parent/guardian 2–3 months post clinic visit)

1 **Since the ENT clinic appointment at Alder Hey, has your child continued to have nose bleeds?**
(circle one below)
Yes
No
+ If yes,
a. same number of episodes per week/month
b. fewer episodes

2 **Do you think Naseptin cream was helpful?**
(circle one below)
Yes
No

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