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Management of patients with epistaxis by general practitioners: impact of otolaryngology experience on their practice

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Abstract This study aims to assess the management of patients with epistaxis by general practitioners (GPs) and to show whether previous experience as a junior doctor in ear, nose and throat (ENT) surgery influences their practice. A questionnaire was sent together with self-addressed reply envelopes to a random sample of 1,000 GPs. Four hundred and twenty eight GPs replied (43% response rate). Ninety-eight percent GPs see less than five epistaxis per week. Eighty-six percent GPs seek a specialist opinion for approximately one in four patients seen. Fifty percent GPs would arrange investigations. There was a wide variation in these and the first aid advice given. Fifteen percent GPs had previous experience in ENT. The only significant difference in the management of epistaxis with these GPs is that they were 2× more likely to cauterise a nose with silver nitrate (P=0.002). There is no general consensus on the management of epistaxis by GPs and despite previous experiences in the specialty as a junior doctor, this fails to have a significant impact on the day to day management of epistaxis.

Keywords Epistaxis · Family practitioners · Data collection

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Introduction

Epistaxis is a common symptom managed by both general practitioners (GPs) as well as ear, nose and throat (ENT) specialists. The majority of patients can be managed conservatively obviating the need for hospital review or admission. Conservative management by the GP includes appropriate first aid advice, investigations and outpatient procedures such as nasal cautery. In the context of an overburdened National Health Service, there is a push on GPs to develop specialist interests that could potentially reduce the utilisation of hospital resources. This includes the development of general practitioners with specialist interests in ear nose throat (GPsiENT) and qualifications such as the post-graduate diploma in ear nose throat (PGDipENT). We designed this study in order to evaluate the impact of previous otolaryngology experience on the practice of GPs on the management of patients with epistaxis.

Methods

A questionnaire was sent to a random sample of 1,000 North London GPs together with self-addressed reply envelopes.

The questionnaire used had been modified from a previous study [6] and included questions on the number of patients with epistaxis treated and the ratio of patients referred for specialist management, the use of cautery and nasal packing, type of investigations performed as well as the advice provided to the patients. Finally the GP was asked to record whether they have had any hospital ENT experience (See Appendix 1).

The data from the replies were added onto an excel database and then transferred and analysed in SPSS (version 11.0). Means and standard deviation was used for descriptive statistics of normally distributed variables, while medians and range was used for non-parametric variables. Pearson Chi-Square and Fisher exact test were used for comparison of proportions, as appropriate.

Results

A total of 428 GPs returned the questionnaire (response rate of 43%). Response rates for individual questions varied from 94 to 99%.

The vast majority (98%) see less than five patients per week with epistaxis (See Table 1). However, they refer a substantial part of them, most referring about one in four patients that is one patient per week, while one in seven GPs refer the majority of patients with epistaxis (See Table 2).

Approximately 20% of GPs use cautery. Silver nitrate is the most popular method used (18%), while three reported the use of diathermy (See Table 3). About half of the GPs do not arrange any investigations, while the other half investigate freely. There is a wide variation in the types of investigations requested with 25 different permutations. The three most common investigations are full blood count (FBC) 40%, clotting 32%, blood pressure 28%. The majority of GPs (86%) would not pack a nose. From those who would perform nasal packing, 9% use ribbon gauze and only 1% use bismuth iodoform paraffin paste (BIPP) soaked gauze, kaltostat (calcium alginate absorbable dressing) pack, nasal tampon (an expandable foam sponge pack e.g. merocel pack) or a foley catheter with a balloon, respectively.

Four hundred out of 428 GPs give advice: However, while 91% recommend nasal pressure only, 40% recommend the adoption of forward-leaning posture and only 36% the use of cold compresses, 16% the avoidance of trauma including sneezing or blowing nose. The percentage of GPs who recommend all four methods is only 3%. Interestingly six GPs advised to patients with epistaxis to lean their heads backwards, while five GPs advised the use of ointment (which would be quite useful for the prevention of epistaxis, but of rather questionable value as a first aid measure).

Only 15% GPs had previous ENT hospital experience at senior house officer (SHO)/house officer (HO) level, for a mean 5.5 months (SD 2.7 months, range 0.5–36 months). Among the 53 GPs who had previous ENT hospital experience, 45 had this in the UK and 8 abroad.

We compared the two groups of GPs with and without ENT experience to see if there was any difference in their management strategies. There was no change in the referral rate of patients between the two groups ($P = 0.89$). Similarly there was no significant difference between the two GP groups in packing rates ($P = 0.24$ Pearson Chi-Squared), investigations performed ($P = 0.85$ Pearson Chi-Squared) and first aid advice ($P = 0.95$ Chi Squared).

However, there was a significant difference in cautery rates ($P = 0.002$ Pearson Chi-Squared) (See Fig. 1). Only 19% of GPs with no previous ENT

Table 1 Number of patients with epistaxis per week

	Frequency	Valid percent
Valid		
<5	414	98.1
5–10	5	1.2
10–20	3	0.7
Total	422	100.0
Missing	6	
Total	428	

Table 2 ENT refereal rates among general practitioners

	Frequency	Valid percent
Valid		
Almost none	57	13.7
About 25%	302	72.8
About 50%	42	10.1
About 75%	12	2.9
Almost all	2	0.5
Total	415	100.0
Missing		
System	13	
Total	428	

Table 3 Cautery type

	Frequency	Percent
Valid		
None	338	79.0
AgNO3	83	19.4
Diathermy/AgNO3	2	0.5
Diathermy	1	1.2
Total	424	99.1
Missing		
System	4	0.9
Total	428	100.0

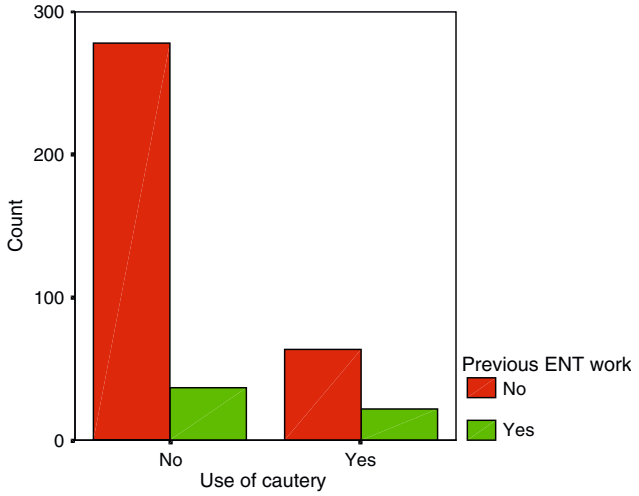

Fig. 1 Comparing use of cautery versus previous ENT experience

experience would use nasal cautery compared with 37% of GPs who had previously done ENT. Odds ratio 2.58 (95% Confidence intervals: 1.48–4.67)—in other word a GP is more than twice as likely to use nasal cautery if they have had previous hospital ENT experience (See Table 4).

Discussion

General practitioners in our study appear to see small numbers of patients with epistaxis with the overwhelming majority seeing less than five per week. This could reflect the fact that many patients do not attend their GP with what they consider to be a minor problem or that these patients are managed either directly by the GP's nurse or accident and emergency. There is minimal published data on the incidence of epistaxis seen by GPs. Griffiths [5] found that during a 6 month period approximately 10% of patients attended his practice with an ENT problem. Of these epistaxis was the most common nasal problem affecting approximately 2% of all ENT cases. Action on ENT [1] audited 10 primary pilot sites and found that 37% of referrals would be potentially suitable for management by a GP with Specialist Interest. Epistaxis was amongst the 12 most common of these conditions.

There seemed to be reluctance of GPs to actively manage epistaxis-nasal packing and nasal cautery were used very infrequently. Quite contrary to common practice in the majority of ENT departments in this country, ribbon gauzes were used to pack the nose when packing was performed. Perhaps more importantly there was an apparent lack of clear understanding of the appropriate investigations or even the first aid measures. Not all patients with epistaxis need investigations, and it is understood that investigations must be tailored to the individual patient. However, if any investigations are undertaken the inclusion of a full blood count and clotting screen would arguably be the most appropriate. We accept that a clotting screen may not be easily arranged in some countries by their GP. In contrast to accepted wisdom, we showed that previous ENT experience per se, does not guarantee appropriate management or reduced rates of referrals. Actually the only clear difference that previous ENT experience made was in the use of nasal cautery with silver nitrate.

One explanation is that silver nitrate cautery is a quick and easy method of controlling epistaxis for obvious bleeding points anteriorly. It requires minimal equipment (light source, speculum, local anaesthetic and silver nitrate sticks) and hence could explain why GPs are happy to perform this task.

We did not enquire as to how long ago they had gained their experience, as this may have some bearing on the results, with changes in practice over time.

If GPs are presented with only small numbers of patients actively bleeding, the need and practice of

Table 4 Statistical analysis comparing use of cautery with previous ENT experience

	Value	*df*	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson chi-square	10.305[b]	1	0.001	0.002	0.002	
Continuity correction[a]	9.232	1	0.002			
Likelihood ratio	9.237	1	0.002	0.003	0.002	
Fisher's exact test				0.003	0.002	
Linear-by-linear association	10.280[c]	1	0.001	0.002	0.002	0.00
No. of valid cases	401					

[a] Computed only for a 2 × 2 table

[b] Zero cells (0.0%) have expected count less than five. The minimum expected count is 12.65

[c] The standardized statistic is 3.206

packing is minimal so the resources to treat this may not be given priority with the added element of deskilling. More importantly, in order to change the practice, we cannot any longer depend on the ''diffusion'' of knowledge from a previous ENT post. This correlates with a previous study by Bhalla et al. [2] who looked at whether clinical assistant experience in ENT influenced general practitioner referral rates to hospital. He found there was no difference in referral rates between a partner who attended the hospital for ENT sessions and partners in the practice who had no previous experience or between another demographically matched practice.

There are a number of papers which provide a clear and structured guide aimed at GP's and the management of epistaxis [4, 7, 8]

The Government through the NHS plan for England [3] aims to promote the role of GpwSI's, introducing 1,000 such GPs by 2004. (http://www.nhs.uk/nationalplan/nhsplan.htm). This expansion will help promote a degree of standardization to the management of a number of common ENT conditions including epistaxis by a number of means. The GPwSI is encouraged to have a close working relationship with the local ENT Department, perhaps through sharing outpatient clinics. This allows problems to be discussed directly with the consultant. The GPwSI should show regular proof of continuing professional development perhaps including higher qualifications such as the post-graduate diploma in ENT (PGDipENT). This is a part time one-year program for GP seeking to specialize in managing ENT diseases at primary care level. This is through assessment of clinical skills in the outpatient department by an approved mentor (ENT consultant), completion of specific course modules (six in total) and success in observed structured clinical examination (OSCI) and viva voce exams.

The GPwSI should also be able to support and educate GPs locally with regard to the use of the GPwSI service and ENT practical issues.

Conclusions

General practitioners see small numbers of epistaxis per week. The majority refer approximately one in four patients to their local ENT Department. Fifty percent GPs arrange investigations. There is a wide variation in first aid advice given and investigations arranged. It appears that limited experience as an SHO fails to provide a significant impact on the day to day management of epistaxis by GPs. It is possible that more focused training in ENT may provide a way to alter the GPs practice.

Appendix 1

1. In a week, roughly how many patients would attend the department with epistaxis?

< 5 ☐ 5-10 ☐ 10-20 ☐ >20 ☐

2. Roughly, what percentage of the patients attending the practice with epistaxis would be referred to the ENT department?

None ☐ ~25% ☐ ~50% ☐ ~75% ☐ All ☐

3. Is cauterisation used in your practice?

Y ☐ N ☐

If answer is Yes, what do you use?…….

4. Would you routinely arrange any investigations?

Y ☐ N ☐

If answer is Yes, what would you arrange?…….

5. What first aid measures do you advise the patient with recurrent epistaxis?

……..

…….

…….

6. Would you pack a nose in your practice if a patient was actively bleeding?

Y ☐ N ☐

If answer is Yes, what would you use?…….

7. Have you ever worked as a HO/SHO in an ENT Dept?

Y ☐ N ☐

If answer is Yes, where did you work?……..

how long did you work there?…….

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