

Nasal septal surgery: is routine follow-up necessary?

P. MURTHY, F.R.C.S., W. S. MCKERROW, F.R.C.S.

Abstract

An audit project was undertaken to appraise the outcome of 95 cases of septal surgery over a 12-month period, taking into account the subjective alteration of symptoms, appearances at anterior rhinoscopy and complications. Seventy-three patients (76.8 per cent) attended the follow-up clinic three to six months (median four months) after surgery. There was an improvement in short-term nasal breathing and in the clinical appearance of the septum in 84.9 and 96.9 per cent respectively; a complication rate of 10.9 per cent and an overall satisfaction rate of 81.3 per cent were also noted. These results support those of other reported series and suggest that routine follow-up of uncomplicated cases of septal surgery is unnecessary.

Key words: Nasal septum, surgery; Post-operative complications; Follow-up studies

Introduction

Nasal septal surgery, comprising submucous resection (SMR) and septoplasty, is one of the most common procedures carried out by ENT surgeons throughout the world. The principles of SMR were first described by Freer (1902) and the modified approach of septoplasty subsequently introduced by Cottle and Loring (1946). These procedures, involving the resection and/or conservation and relocation of septal tissues have been repeatedly modified since their introduction.

The clinical outcome of septal surgery has been shown to be beneficial in the great majority of cases, with the overall satisfaction rate ranging from 63–75 per cent on long-term follow-up (Peacock, 1981; Dommerby *et al.*, 1985; Fjermedal *et al.*, 1988). Complications, both short and long-term, comprising septal haematoma, septal perforation, crusting, nasal infection, adhesions and external nasal deformity are relatively low, usually less than 10 per cent (Fjermedal *et al.*, 1988; Low and Willatt, 1992). We have therefore assessed the results of our own series of septal operations and will discuss the need for routine follow-up of these cases.

Materials and methods

A total of 105 patients (male 85 and female 20) undergoing septal surgery at Raigmore Hospital, Inverness, were assessed during a 12-month period. This included 56 (53.3 per cent) submucous resections and 49 (46.7 per cent) septoplasties. The pre-operative severity of septal deviation was noted. A follow-up appointment was arranged in 95 cases (at

the median period of four months after surgery). The aim of the project was to record the number of patients attending for review and to examine the outcome, complications and patient satisfaction following surgery. The following criteria were assessed: (1) the patient's subjective symptoms; (2) the clinical appearances at anterior rhinoscopy; and (3) complications.

In addition, questionnaires were distributed to a random group of patients within 12 months of undergoing surgery (Table I). This group included both patients who attended for follow-up, when the questionnaires were handed to them personally, and those who failed to attend or were not given follow-up appointments to whom the questionnaires were sent by post. The questions were directed towards eliciting the patient's overall opinion of the operation in terms of satisfaction with the results and whether they would recommend the procedure to a friend with a similar problem.

Results

Of the 95 patients given a follow-up appointment, 73 (76.8 per cent) attended. The results of surgery were assessed in terms of the patients' subjective symptoms, particularly alteration of nasal breathing, and the appearances at anterior rhinoscopy. Table II shows the effects of the original severity of septal deviation on the nasal breathing status following the operation. Sixty-two patients (84.9 per cent) reported an improvement in their nasal breathing. The remaining 11 (15.1 per cent) thought that it was unchanged or worse.

TABLE I

QUESTIONNAIRE SENT TO PATIENTS TO ELICIT THEIR OVERALL OPINION OF THEIR OPERATION

Evaluation of Ear, Nose and Throat Surgery

We, the Ear, Nose and Throat surgeons at Raigmore Hospital are keen to monitor our own performance in order to provide high quality care. We would be grateful if you could help us by answering a few questions. Once you have completed the questionnaire please put it in the attached envelope and leave it at the reception desk **before** leaving the clinic.

Your questionnaire will be analysed by the Medical Audit Department from Highland Health Board, who will tell us how we are doing overall – but they will not tell us what any individual said – so please be honest. It would be helpful if you could write your name on the form so the Medical Audit Department can compare your response with your hospital notes.

Many thanks in advance for your help.

Full name: _____

- please tick
- (1) How happy are you with the results of your operation:
- very happy
- fairly happy
- fairly unhappy
- very unhappy
- (2) Compared with before your operation is your breathing:
- much improved
- slightly improved
- about the same
- slightly worse
- much worse
- (3) If a friend had the same problem, would you recommend this operation. YES/NO
- (4) Do you have any comments on your care, whilst in hospital, or as an outpatient:
- _____
- _____
- _____

The original severity of deviation seemed to have no direct correlation with the nature of the alteration of nasal breathing. Table III shows the post-operative appearance of the septum compared to the original severity of deviation. This data was recorded in 68 patients at follow-up. Forty-one cases (60.3 per cent) were noted to have a straight septum, 25 cases (36.8 per cent) had a lesser deviation and two cases (2.9 per cent) had an unchanged septum. There appeared to be a direct correlation between the pre-operative and post-operative appearances of the septum – the milder the deviation, the greater the chance of achieving a straight septum following surgery. Eight patients (10.9 per cent) at follow-up

TABLE III

COMPARISON OF ORIGINAL SEVERITY OF SEPTAL DEVIATION WITH POST-OPERATIVE APPEARANCE OF SEPTUM (n = 68)

Severity of septal deviation	Post-operative appearance of septum (%)		
	Straight	Less deviated	Unchanged
Mild (n = 8)	6 (75.0)	2 (25.0)	0 (0)
Moderate (n = 36)	22 (61.1)	12 (33.3)	2 (5.6)
Severe (n = 24)	13 (54.2)	11 (45.8)	0 (0)

were noted to have complications as a result of surgery (Table IV).

Responses were obtained by questionnaire from 75 patients indicating their level of satisfaction with the results of the operation. Seventy-one replies were obtained with recommendation of the operation to a friend. The results are shown in Table V. Of the three patients who were very unhappy with their results, one presumed that the anaesthetic was responsible for the subsequent development of asthma, one was given a fright by an attending nurse who could not feel his pulse in the recovery ward and one patient was generally disappointed with the results of the operation. Four of the 13 patients who would not recommend the operation to a friend said that they were fairly happy with the results of the operation. The remaining nine were either fairly, or very, unhappy.

Discussion

Deformity of the nasal septum is a very frequent clinical entity encountered in ENT practice. Septoplasty and SMR, are hence included amongst the most routinely performed procedures in the specialty. Significant advances in the surgical techniques over the last century have ensured excellent therapeutic results and low complication rates in the great majority of cases of septal surgery.

Previous studies on the outcome of septal surgery emphasize high rates of symptomatic relief of nasal obstruction and good clinical appearances. Appraisal of a group of patients having submucous resection has shown that short-term benefits were obtained in 93.4 per cent and an overall post-operative long-term (average 23.5 months) satisfaction rate of almost 70 per cent (Low and Willatt, 1992). A large study on septoplasty has reported a success rate of 70.5 per cent (Samad *et al.*, 1992). Our own study has shown an improvement in nasal breathing in 84.9 per cent of patients on short-term follow-up. Persistent or recurrent nasal obstruction has been found to be a problem in 30 per cent of cases on long-term follow-up, two or more years after surgery and this has been postulated to be due to unfavourable airflow

TABLE II

EFFECT OF ORIGINAL SEVERITY OF SEPTAL DEVIATION ON POST-OPERATIVE BREATHING STATUS (n = 73)

Severity of septal deviation	Effect on breathing (%)				
	Much easier	A bit easier	Same	A bit worse	Much worse
Mild (n = 8)	6 (75.0)	2 (25.0)	0 (0.0)	0 (0.0)	0 (0.0)
Moderate (n = 37)	19 (51.4)	8 (21.6)	8 (21.6)	1 (2.7)	1 (2.7)
Severe (n = 28)	20 (71.4)	7 (25.0)	0 (0.0)	0 (0.0)	1 (3.6)

TABLE IV
COMPLICATIONS OF SEPTAL SURGERY (n = 73)

Complications	
3	Adhesions
2	Septal perforations
2	Crustings
1	Haematoma

patterns as a result of minor residual septal deviation (Low and Willatt, 1992).

Our study also highlighted information on the relationship of the original severity of septal deviation to the relief of nasal obstruction and the post-operative appearance of the septum. In the former case, there was no direct association but in the latter, the results demonstrated that the degree of septal deviation was indirectly proportional to the degree of relief of nasal obstruction. The complications noted were low: three adhesions (4.1 per cent), two perforations (2.7 per cent), two crustings (2.7 per cent) and one haematoma (1.4 per cent), the results being similar to those of another large series (Low and Willatt, 1992). Analysis of the responses in the questionnaires revealed that 81.3 per cent of the patients were satisfied with the results of the operation and 81.7 per cent would readily recommend the procedure to a friend if needed. This again serves to reinforce the view of previous studies which have reported similar satisfaction rates at short-term follow-up (Low and Willatt, 1992; Samad *et al.*, 1992).

Of the 95 patients given a follow-up appointment, 73 (76.8 per cent) attended. This may be due to the fact that a proportion of the non-attenders may have felt cured and had chosen not to attend the clinic, although it is also possible that a proportion may have been unhappy with the results.

Routine follow-up of cases of uncomplicated septal surgery is an ongoing practice in a large number of otolaryngology units throughout the country. The results of this project and our concurrent work (Murthy and Mckerrow, 1994) show good results in terms of symptomatic relief and overall patient satisfaction rates in approaching 80 per cent of cases on short-term follow-up. This raises some doubt about the strict requirement for a follow-up. Continued downward pressure on waiting lists as expressed in The Government's Strategy (1989) makes it imperative that unnecessary follow-up should be minimized. Follow-up of some patients is probably essential for quality control but routine post-operative reviews should be avoided unless a complication has occurred or a less than satisfactory result is anticipated. It has been shown during recent research on the patterns of attendance at outpatient clinics that as many as 87 per cent of attendances were follow-ups (Cartwright and Windsor, 1992). An independent report by the *National Audit Office* (1991) states that waiting times for preliminary

TABLE V
PATIENTS' OPINION OF THE OPERATION

Satisfaction with results (n = 75)		Recommendation to a friend (n = 71)	
42	Very happy (56%)	58	Yes (81.7%)
19	Fairly happy (25.3%)	13	No (18.3%)
11	Fairly unhappy (14.7%)		
3	Very unhappy (4.0%)		

routine appointments at ENT clinics in certain hospitals are as long as 72 weeks. The same specialty has the highest non-attendance rate (13–26 per cent). Thus, maintaining stricter control over follow-up appointments would enable waiting times to be reduced. It would also increase the proportion of new patients seen and help to reduce the non-attendance rate of review patients and the consequent waste of resources. One of the proposals in the *National Audit Office Report* is that health authorities ensure that hospitals and GPs carry out measures to limit inappropriate attendances where possible through agreeing and carefully introducing protocols for care which set out their respective roles.

Based on the results of our audit project, we have made several modifications to the post-operative management of patients undergoing septal surgery. Routine follow-up appointments at outpatient clinics, previously made three to six months after surgery, are no longer arranged except in very difficult cases, where a complication in the peri-operative period has occurred or where a less than satisfactory result is anticipated. The vast majority of patients, who are expected to achieve a satisfactory outcome from their surgery, are reassured of this fact but are given certain verbal and written guidelines at the time of discharge from hospital. These include seeking immediate medical advice in cases of persistent bleeding, pain or discomfort, a high temperature or feeling generally unwell during the initial few days after surgery. They are given a telephone number to obtain access to the ENT department without undue delay in the event of such an occurrence. They are also instructed to contact their GPs in the later post-operative period should they develop, in addition to the above features, symptoms of persistent or recurrent nasal obstruction. In our series one serious complication – a haematoma – was encountered during the immediate post-operative period. This was appropriately dealt with and the patient discharged home on antibiotics. A complication of this nature may occur at any time during the early post-operative period and adequate counselling of patients should ensure that they seek specialist self-referral immediately. This type of surgery is carried out primarily on account of the patient's symptoms. Routine pre-arranged post-operative follow-up appointments for patients, the majority of whom will be asymptomatic, would hence seem superfluous and of little benefit to them.

General practitioners play a key role in achieving these objectives. By bestowing upon them greater responsibility and enabling them to use greater initiative in the care of their patients, unnecessary

hospital visits can be minimized. Although the aftercare of patients undergoing septal surgery is limited, GPs could occasionally be called upon to remove nasal splints, prescribe medication and review patients whenever necessary. Education of GPs is mandatory to enable them to deal with occasional problems during the post-operative period. This objective has been aided by means of a standard typed protocol, sent along with the discharge summary, outlining the common problems likely to be encountered and methods of dealing with them appropriately. One would not wish to place an extra burden on the already overworked GPs by expecting them to review every single patient as this would be inappropriate and cumbersome. Most patients would however require to see their GPs within a week or two of this type of surgery to obtain clearance to return to work. The proportion of patients who would require to seek consultation due to post-operative problems is, as highlighted above, small and it is hoped that reviewing them would not cause undue pressure on the workload of GPs. Stringent verbal and written advice to both patients and GPs should ensure a sufficiently high level of understanding to enable them to be aware of and to deal with possible problems appropriately and make the practice of reducing routine hospital follow-ups safe and satisfactory. Access to specialist consultation should be available at short notice and patients could be referred back to the ENT department in the event of difficult problems being encountered. These measures would go a long way to ensuring that unnecessary reviews in hospital specialist units are kept to a minimum, thereby conserving resources, enabling new patients to be seen early and establishing high clinical standards and good quality patient care.

Acknowledgements

We would like to thank Mrs Barbara Brodie, Audit Controller, Hilton Hospital, for her invaluable

assistance in collating and analysing the data, Mr M. R. Laing and Mr L. G. McClymont, whose patients were involved in the study and also Mrs A. McGarry for typing the manuscript.

References

- Cartwright, A., Windsor, J. (1992) Patterns of attendance. In *Outpatients and their doctors: a study of patients, potential patients, general practitioners and hospital doctors*. Department of Health, Institute for Social Studies in Medical Care, London: HMSO, pp 45–52.
- Cottle, M. H., Loring, R. M. (1946) Corrective surgery of the external pyramid and the nasal septum for restoration of normal physiology. *Illinois Medical Journal* **90**: 119–131.
- Dommerby, H., Rasmussen, O. R., Rosberg, J. (1985) Long-term results of septoplastic operations. *Journal of Otorhinolaryngology and its Borderlands* **47**: 151–157.
- Fjermedal, O., Saunte, C., Pedersen, S. (1988) Septoplasty and/or submucous resections? Five years of nasal septum operations. *Journal of Laryngology and Otology* **102**: 796–798.
- Freer, O. T. (1902) The correction of deflections of the nasal septum with a minimum of traumatization. *Journal of the American Medical Association* **4**: 61–69.
- Low, W. K., Willatt, D. J. (1992) Submucous resection for deviated nasal septum: a critical appraisal. *Singapore Medical Journal* **33**: 617–619.
- Murthy, P., Mckerrow, W. S. (1994) Routine nasal surgery – an audit to assess the value of outpatient follow-up. *British Medical Journal* (in press).
- NHS Outpatient Services (1991) In *National Audit Office Report by the Comptroller and Auditor General* HMSO: London, pp 1–27.
- Peacock, M. R. (1981) Submucous resection of the nasal septum. *Journal of Laryngology and Otology* **95**: 341–356.
- Samad, I., Stevens, H. E., Maloney, A. (1992) The efficacy of nasal septal surgery. *Journal of Otolaryngology* **21** (2): 88–91.
- The Government's Strategy (1989) In *Working for Patients* HMSO: London, pp 4–9.

Address for correspondence:
Mr P. Murthy, F.R.C.S.,
Department of ENT,
Raigmore Hospital NHS Trust,
Perth Road,
Inverness IV2 3UJ.