Long-term results of FESS – a random survey

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Abstract Very little work has been published in literature about the long-term results of endoscopic sinus surgery especially with substantial numbers. A cross-sectional study was performed of patient satisfaction following endoscopic sinus surgery over a mean period of 9.8 years, of 155 patients. A variety of nasal symptoms were assessed and interesting data was recorded in relation to abatement of symptoms related to nasal and systemic allergy. Overall 94% of patients were satisfied with functional endoscopic sinus surgery (FESS) in relieving various nasal symptoms and a statistically significant number showed improvement in allergic symptoms. Our series has the longest follow-up with the largest patient group recorded in literature.

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Keywords Functional endoscopic sinus surgery · Long-term results · Random survey

Introduction

Nasal conditions are difficult to quantify, as the symptoms correlate poorly with objective signs [1]. Various nasal conditions present with similar symptoms and often it is difficult to separate the different nasal pathologies. It is not uncommon to see patients having multiple nasal pathologies like chronic sinusitis and nasal polyposis. These factors make it difficult to assess the success of any surgical procedure objectively.

Functional endoscopic sinus surgery (FESS) is a relatively new concept but is increasingly becoming popular with the majority of ENT surgeons [2]. Like any other procedures it is coming under close scrutiny with relation to evidence-based efficacy. There is a great need to assess the efficacy of this procedure especially on a long-term basis.

Tyrone County Hospital was a pioneer in introducing endoscopic sinus surgery in Northern Ireland. This unit has a great patient turn over for endoscopic sinus surgery and has an excellent long-term follow-up of the cases in a well established exclusive “long-term follow-up clinic”.

To answer the question of long-term efficacy of endoscopic sinus surgery, a cross-sectional survey was performed to assess patient satisfaction following endoscopic sinus surgery. Many interesting facts were recorded and presented in this article.

Methods

In Tyrone County Hospital patients who failed to respond to medical treatment and underwent endoscopic sinus surgery for various indications (chronic sinusitis, nasal polyposis…) are followed up in the routine ENT clinic on a regular basis for the first 6–9 months. After this period they are followed up in dedicated long-term follow-up clinics for endoscopic sinus surgery.

Patients, waiting to be seen in the “long-term follow-up clinic, were randomly recruited to fill in a questionnaire. One hundred and fifty-five questionnaires were collected, from 74 males and 81 females. The patients were aged between
Fig. 1 Preoperative symptom score for primary nasal symptoms

NO = Nasal obstruction, PND = Postnasal drip, HA/FP = Headache/facial pain, AR = Symptoms of allergic rhinitis. (0 = no symptoms, 10 = maximum symptoms).

NO: (139/155) 89.7% severe, (9) 5.8% moderate, (6) 3.9% mild symptoms and (1) case had no symptoms.
PND: (123) 79.3% severe, (20) 12.9% moderate, (8) 5.2% mild and (4) 2.6% no symptoms.
HA/FP: (105) 67.8% severe, (22) 14.2% moderate, (18) 11.6% mild and (10) 6.4% no symptoms.
AR: (52) 33.6% severe, (24) 15.5% moderate, (14) 9% mild and (65) 41.9% no symptoms.

Fig. 2 Postoperative symptom scores for primary nasal symptoms

NO: (4/155) 2.6% severe, (7) 4.5% moderate, (143) 92.3% mild and (1) 0.6% no symptoms.
PND: (5/155) 3.2% severe, (13) 8.4% moderate, (133) 85.8% mild and (4) 2.6% no symptoms.
HA/FP: (5/155) 3.2% severe, (4) 2.6% moderate, (136) 87.7% mild and (10) 6.5% no symptoms.
AR: (6/155) 3.9% severe, (20) 12.9% moderate, (64) 41.3% mild and (65) 41.9% no symptoms.

As previously mentioned, patients marked their individual symptoms on a scale of 0–10, where 0 = no symptoms, 1 = mild, and 10 being the most severe of the suffering in the patients' perception. For ease of presentation, scores of 1–4 were considered as mild symptoms, 5–7 as moderate and 8–10 as severe symptoms.

Preoperative primary nasal symptom scores are represented graphically in Figure 1. Ninety percent complained of severe nasal obstruction, 79% severe postnasal discharge, 68% severe headaches/facial pain and 33.6% had symptoms of severe allergic rhinitis before surgery.

Postoperative symptoms scores are represented graphically in Figure 2. Less than 3% complained of residual severe obstruction, 3.2% severe postnasal discharge, 3.2% severe headaches/facial pain, 4% severe allergic rhinitis.

As is very obvious by the graphs there is a complete reversal of the trends in the symptom scores from severe symptoms in the preoperative state to the postoperative period. 94.6% of the patients were very satisfied with the results of FESS in relieving their primary nasal symptoms. Statistical analysis was done using SPSS Version 11, with the help of an experienced statistician from the Queens University of Belfast. Wilcoxon Signed Ranks Tests were used for individual symptoms which showed a high statistical significance of the findings (p < 0.005).

Similarly scores for associated symptoms, i.e. systemic allergies were recorded and are represented in Figure 3. Seventy percent had severe house dust mite allergy, 12% severe hay fever, 16% severe asthma, 2% severe duration of follow-up was 9.8 years (range 4–12 years) and the data was recorded over a period of 8 months.

Factors analyzed were classified as primary nasal symptoms (nasal obstruction, anterior nasal discharge, postnasal drip, headache/facial pain and allergic rhinitis–sneezing/itching) and associated conditions (of systemic allergy), i.e. house dust allergy, hay fever, asthma and chest infections, allergy to dairy products and hypersensitivity to aspirin. The patients were asked to mark on a visual analog score their symptom severity, for each named symptom, on a score of 0–10 (0 being no symptoms and 10 maximum). They were asked to compare their symptoms before surgery versus their current symptoms; after surgery.

They were also asked about their experience of the surgery, the discomfort/pain suffered during the procedure and recovery period and the time taken for their symptoms to abate.

The data of preoperative versus postoperative scores was analyzed statistically with Wilcoxon Signed Ranks Tests and presented graphically.

Results

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