

Original Research

Evaluation of outcome & complications of FESS in patients with chronic rhino sinusitis

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ABSTRACT:

Background: Functional endoscopic sinus surgery (FESS) is a surgical treatment of sinusitis and nasal polyps, including bacterial, fungal, recurrent acute, and chronic sinus problems. The present study was conducted to assess outcome of FESS in patients with chronic rhino sinusitis. **Materials & Methods:** 75 patients of chronic rhino sinusitis of both genders were examined with anterior and posterior rhinoscopy. Everybody underwent a CT scan and underwent FESS. **Results:** Age group 18-23 years had 16 patients, 25-30 years had 35 and 31-36 years had 24 patients. The difference was non-significant ($P > 0.05$). The common clinical features were headache in 52, halitosis in 14, anosmia & hyposmia in 11, nasal obstruction in 58, nasal discharge in 67, post nasal drip in 20 patients. The difference was significant ($P < 0.05$). Clinical features such as headache, halitosis, anosmia & hyposmia, nasal obstruction, nasal discharge and post nasal drip following FESS decreased to 6, 1, 3, 7, 5 and 2 patients respectively. The difference was significant ($P < 0.05$). Common complications following FESS were synechia seen in 7, bleeding nose in 11 and orbital subcutaneous emphysema in 5 patients. The difference was significant ($P < 0.05$). **Conclusion:** The most of the patients with chronic rhino sinusitis who underwent FESS had reduction in clinical features. The common complications of FESS were synechia, bleeding nose and orbital subcutaneous emphysema. **Key words:** Bleeding nose, FESS, Outcome

Received: 22 February, 2021

Accepted: 24 March, 2021

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This article may be cited as: Tugave J, Rai V. Evaluation of outcome & complications of FESS in patients with chronic rhino sinusitis. J Adv Med Dent Sci Res 2021;9(4): 190-193.

INTRODUCTION

A collection of conditions collectively referred to as sinusitis are defined by inflammation of the paranasal sinus mucosa (PNS). Since the nose is almost always involved, the condition is referred to as rhinosinusitis (CRS).¹ The diagnosis of chronic rhinosinusitis consists of either one major and two minor symptoms/signs (headache, fever, halitosis, fatigue, dental pain, cough, ear pain/pressure/fullness) lasting longer than 12 weeks, or two major symptoms/signs (facial pain/pressure, facial congestion/fullness, nasal blockage, nasal discharge, hyposmia/anosmia, purulence on nasal examination).²

Functional endoscopic sinus surgery (FESS) is a surgical treatment of sinusitis and nasal polyps, including bacterial, fungal, recurrent acute, and chronic sinus problems.³ FESS uses nasal endoscopes to restore drainage of the paranasal sinuses and ventilation of the nasal cavity. Today, FESS is the gold standard of surgical therapy of chronic

rhinosinusitis. The goal of functional endoscopic sinus surgery (FESS) is to remove tissue that is obstructing the osteo metal complex (OMC) and facilitate drainage while preserving the mucous membrane and normal, non-obstructing structure.⁴ With the excellent intra-operative imaging of the OMC provided by the rigid fiberoptic nasal telescope, the surgery can be accurately targeted to the important locations. A tiny camera that is fastened to the endoscope's ocular allows the image to be shown onto a TV screen. Using microdebriders, diseased tissue is removed while the healthy mucosa is preserved.⁵ The present study was conducted to assess outcome of FESS in patients with chronic rhino sinusitis.

MATERIALS & METHODS

The present study comprised of 75 patients of chronic rhino sinusitis of both genders. All voluntarily gave their written consent for the participation of the study.

Data such as name, age, gender etc. was recorded. All patients were examined with anterior and posterior rhinoscopy. Everybody underwent a CT scan.

The operating method under LA (pterygopalatine block)/GA was explained to the patients following PAC clearance. Topical adrenaline dissolved in 4% lignocaine solution is used to decongest the nasal mucosa. Transoral pterygopalatine block was used in LA patients in addition to topical anesthesia and decongestion. The procedure used for endoscopic

septoplasty was conventional. Nasal endoscopy was carried out following septoplasty in order to view the nasal cavity and lateral nasal wall. It was determined how each individual felt about their pressure, headache, facial pain, blocked nose, congestion, and nasal discharge. All patients were kept under regular follow up for period of 3 to 6 months, postoperatively. Results of the study were assessed statistically. P value less than 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Age group (Years)	Male	P value
18-23	16	0.72
25-30	35	
31-36	24	

Table I shows that age group 18-23 years had 16 patients, 25-30 years had 35 and 31-36 years had 24 patients. The difference was non-significant (P > 0.05).

Table II Assessment of clinical features

Clinical features	Number	P value
Headache	52	0.05
Halitosis	14	
Anosmia & Hyposmia	11	
Nasal obstruction	58	
Nasal discharge	67	
Post nasal drip	20	

Table II, graph I shows that common clinical features was headache in 52, halitosis in 14, anosmia & hyposmia in 11, nasal obstruction in 58, nasal discharge in 67, post nasal drip in 20 patients. The difference was significant (P < 0.05).

Graph I Assessment of clinical features

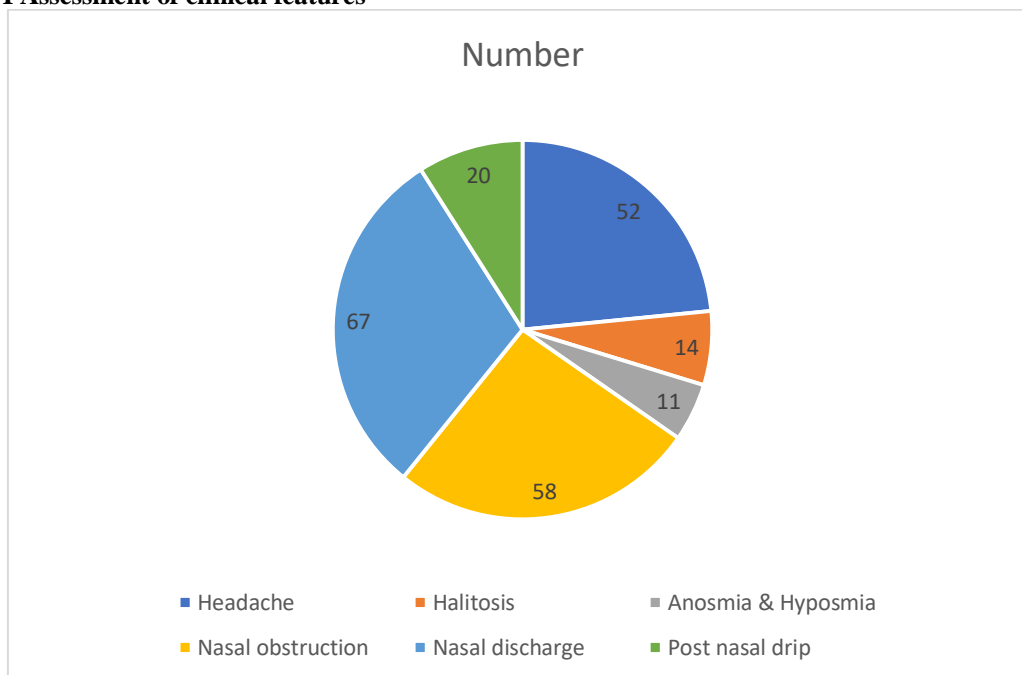


Table III Comparison of clinical features before and after FESS

Clinical features	Before FESS	After FESS	P value
Headache	52	6	0.01
Halitosis	14	1	0.02

Anosmia & Hyposmia	11	3	0.04
Nasal obstruction	58	7	0.01
Nasal discharge	67	5	0.01
Post nasal drip	20	2	0.03

Table III shows that clinical features such as headache, halitosis, anosmia & hyposmia, nasal obstruction, nasal discharge and post nasal drip following FESS decreased to 6, 1, 3, 7, 5 and 2 patients respectively. The difference was significant ($P < 0.05$).

Table IV Assessment of complication of FESS

Complication	Number	P value
Synechia	7	0.05
Bleeding nose	11	
Orbital subcutaneous emphysema	5	

Table IV shows that common complications following FESS were synechia seen in 7, bleeding nose in 11 and orbital subcutaneous emphysema in 5 patients. The difference was significant ($P < 0.05$).

DISCUSSION

Endoscopic sinus surgery has been a common and safe treatment for abnormalities of the Paranasal Sinuses (PNS) for the past 20 years. The efficiency and safety of this operation have been enhanced by powered instruments and stereotactic image-guided surgery.^{6,7} These days, endoscopic methods for treating benign tumors of the orbit, sinuses, nose, and anterior cranial fossa are becoming more and more common. Endoscopic sinus surgery has been transformed by the use of powered dissection in conjunction with suction. Nonetheless, the surgery has been accompanied with the possibility of problems.⁸ A number of issues with endoscopic sinus surgery emerged in the late 1980s and early 1990s. Nevertheless, there is no denying that new instrumentation technology has advanced. Because the powered cutting tool cannot hold the intact skull base or lamina papyracea, it is believed to be safe around these areas.⁹ The present study was conducted to assess outcome of FESS in patients with chronic rhino sinusitis.

We observed that age group 18-23 years had 16 patients, 25-30 years had 35 and 31-36 years had 24 patients. We found that common clinical features was headache in 52, halitosis in 14, anosmia & hyposmia in 11, nasal obstruction in 58, nasal discharge in 67, post nasal drip in 20 patients. Children who underwent surgery had their symptoms, surgical extent, complications, and results assessed by Siedek et al.¹⁰ All patients received questionnaires on their symptoms and quality of life in order to analyze the results. A total of 115 children—77 boys and 38 girls—had a FESS surgery as a result of CRS. The questionnaires had a 64% response rate (73 out of 115 respondents), and the average follow-up period was 5.4 (+/-1.8) years. Of the patients, 71% reported an improvement in their overall quality of life and 76% reported an improvement in their primary symptoms. The VAS indicated a significant ($p < 0.01$) improvement in overall quality of life. Of CRS patients, 62.3% experienced total relief from nasal blockage, 65.5% from facial pain, and 72.5% from

postnasal drip. Improvement of CRS patients' primary nasal symptoms (PNS).

We observed that clinical features such as headache, halitosis, anosmia & hyposmia, nasal obstruction, nasal discharge and post nasal drip following FESS decreased to 6, 1, 3, 7, 5 and 2 patients respectively. Common complications following FESS were synechia seen in 7, bleeding nose in 11 and orbital subcutaneous emphysema in 5 patients. Bezerra et al¹¹ analyzed, with the aid of SNOT-20, the association between endoscopic sinus surgery and disease-specific quality of life. The enrolled patients submitted to endoscopic sinus surgery after drug therapy failed to improve their symptoms. They were assessed based on questionnaire SNOT-20p before and 12 months after surgery. Improvement on total scores and on the five items deemed more important by each patient were assessed. Forty-three patients aged 44 (19), md (IQR), 65% of whom (26/43) were males. Statistically significant improvement was seen on SNOT-20 and SNOT-20(5+) and a correlation was established between preoperative scores and postoperative improved scores ($p < 0.001$). No gender-related differences were observed in quality of life.

Smith et al¹² measured the proportion of patients with chronic rhinosinusitis (CRS) who experience clinically significant improvement after endoscopic sinus surgery (ESS). Patients improved an average of 15.8 percent (18.9 points) on the Rhinosinusitis Disability Index and 21.2 percent (21.2 points) on the Chronic Sinusitis Survey (both $P < 0.001$). Patients significantly improved on all eight Medical Outcomes Study Short Form-36 (SF-36) subscales (all $P < 0.001$). Among patients with poor baseline QOL, 71.7 percent of patients experienced clinically significant improvement on the RSDI and 76.1 percent on the CSS. Patients undergoing primary surgery were 2.1 times more likely to improve on the RSDI (95% confidence interval [CI], 1.2, 3.4; $P = 0.006$) and 1.8 times more likely to improve on the CSS (95% CI, 1.1, 3.1; $P = 0.020$) compared with patients undergoing revision surgery.

CONCLUSION

Authors found that most of the patients with chronic rhino sinusitis who underwent FESS had reduction in clinical features. The common complications of FESS were synechia, bleeding nose and orbital subcutaneous emphysema.

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