

Our Experience Of FESS On Symptomatology In Patients With Chronic Rhinosinusitis In Western Up

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ABSTRACT

Rhinosinusitis is the inflammation of nose and paranasal sinuses. FESS is now the most common procedure for the pts of chronic rhinosinusitis who are refractory to medical treatment.

Aim: To assess that FESS is the best treatment modality to help patients with CRS who are not responding to medical treatment.

Materials and methods: Prospective study of 66 patients those who are treated by FESS from the period of June 2017 to march 2020. Detailed history was taken, local examination, Xray PNS, diagnostic endoscopy and CT PNS was done for the evaluation of patient. FESS was then performed and patients were then followed up at first and third week followed by 3 and 6 months.

Result: Our study showed that 12 patients were improved by first 3 weeks of FESS, 24 by the end of 3 months and 30 patients by the end of 6 months. Improvement on symptomatology is 89% showed improvement in nasal obstruction which was the main complaint and 80% with nasal discharge.

Conclusion: The result of the study showed that overall, 90% were benefitted with our gold standard procedure of FESS with minimal complications.

Keyword: Chronic rhinosinusitis, Xray PNS, CT PNS, Functional endoscopic sinus surgery.

INTRODUCTION

Chronic rhinosinusitis is the main complaint now a days in ENT dept. due to increase in pollution. According to European position paper 2012, defines rhinosinusitis as the chronic inflammation of nose and paranasal sinuses with two or more symptoms¹.

Sinusitis is a very common health problem affecting day today life of a patient. The quality of life is reduced due to its persistent symptoms. Treatment of sinusitis include medical as well as surgical management. Medical treatment includes antibiotics both aerobic and anaerobic ,anti-histaminic , decongestants oral as well as local, and all supportive treatment. But if the patient does not respond to the medical management for three weeks, then surgical procedure has to be taken up. FESS is now the best suited gold standard management for such patients^{2,3}.The basic fundamental of FESS is that mucociliary clearance is reverted by increasing the aeration and drainage of diseased mucosa⁴.Present study is based on the procedure FESS and how patient's symptomatology improves with the procedure.

Aims and Objectives

- 1 .To confirm FESS as the basic strategy to revert symptoms of chronic sinusitis.
2. To assess improvement in symptomatology of patient after FESS.

Materials and Methods

Our prospective study of 66 patients diagnosed with chronic rhinosinusitis and the treated with FESS during the period of June 2017 to march 2020.24 patients in the age group of 31-40 presented in the OPD. Patients below 12 yrs. were not taken into account. Mean age of the study was 35 yrs. Female patients were more than male patients in the ratio of 1.5:1.

Criteria for selecting patients were

1. Diagnosed patient of CRS by an ENT surgeon.
2. Patients with history of sinusitis for more than 12 weeks.
3. CT PNS showing signs of sinusitis.
4. Patient had been on trial of medical treatment.

Detailed history ,examination and relevant radiological examinations with diagnostic endoscopy was done to assess the condition of septum ,nasal mucosa, osteomeatal complex,

Eustachian tube openings and other anomaly if existed. After the detailed study of the patient, it is then taken up for surgical procedure FESS.

After FESS patients were called for follow-up on 1st and 3rd week post Operatively. They assessed on the following criteria.

- 1.mild improvement
- 2.moderate improvement
- 3.full improvement.

During the follow up patient underwent nasal toileting for removal of crusting, for clearance of sinus secretions and to assess the opening of osteomeatal complex. This procedure was repeated for every follow up.

Observations and results

In our study 66 patients were included and all of them were subjected to FESS under General Anaesthesia. Patients follow up was done routinely.

Preoperatively patient's symptoms were graded as follows

- 1.Mild symptom where pts daily activity is not disturbed.
- 2.Moderate symptoms hampering day to day activities ,often absence from work or college.
- 3.Severe symptoms where quality of life is diminished ,regular absence from work and sleep is also disturbed.

Nasal obstruction was the common symptom in 90% of individuals followed by headache 80%.Patients were assessed and graded for their symptoms preoperatively as shown in table 1.

Table 1 preoperative symptom profile score

	Mild 1	Moderate 2	Severe 3	percentage
Facial pain	3	17	6	78.8
Nasal obstruction	3	18	7	84.8
Ant nasal drip	8	5	2	45.5
Post nasal drip	15	3	3	63.3
Allergic rhinitis type symptom	10	7	1	54.5
Other symptoms like bronchial asthma	6	5	1	36.4

Maximum number of patients was of symptom nasal obstruction (85%) followed by facial pain and headache (79%).Symptoms of patients were graded pre and postoperatively at regular intervals. Duration of symptoms varied from 1 to 5 yrs. in maximum number of patients (n=32).average duration came out to be 3 yrs. In our study anterior rhinoscopy revealed nasal polyp in 6 patients, mucopus in 24 patients ITH in 16 patients, mild DNS in 10 patients, middle turbinate hypertrophy in 6 patients and nasal mucosa congestion in 4 patients.(table 1).In posterior rhinoscopy 3 patients revealed posterior extension of nasal polyp. Xray and NCCT PNS were subsequently done to determine the extent of disease and outcome of surgery FESS.

Table 2

Symptoms/ Grades	Nasal Obstruction			Anterior nasal drip			Headache/ Facial pain			Post nasal drip			Allergic Rhinitis			Associate d Condition s		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
1 (improvement)	14	9	2	9	7	1	16	6	3	10	10	0	9	8	1	3	7	5
2 (improvement)	8	13	14	3	3	7	5	13	14	2	6	13	3	4	10	1	0	3
3 (better improvement)	1	3	9	0	1	4	0	1	5	1	1	3	0	0	2	0	0	0

A - 3 weeks, B – 3 months, C – 6 months

Discussion

Rhinosinusitis is the most common problem faced by society on day-to-day basis which costs them a high medical bill, leave from work, sleep disturbance and disturbance in day-to-day activities. By definition chronic rhinosinusitis is the inflammation of nose and paranasal sinuses for more than 12 weeks in single episode. Histologically we can divide into two:

- 1) Polypoidal mucosal changes with eosinophilia
- 2) Submucosal serous gland hyperplasia.

Pathophysiology of chronic rhinosinusitis

Simple chronic rhinitis is an early stage of hypertrophic rhinitis. There is hyperaemia and oedema of mucous membrane with hypertrophy of seromucinous glands and increase in goblet cells. Blood sinusoids particularly those over the turbinates are distended. Sino nasal mucosa produces cytokines and other inflammatory markers producing symptoms like nasal blockage due to congestion, rhinorrhoea due to increased secretions of goblet cells. This leads to the blockage of ostium and secondary bacterial infection.

Due to the ubiquitous nature of fungus, colony of fungi can be found in nose and paranasal sinuses. This leads to the saprophytic growth of fungus.

Bernoulli's Principle

Lowering of pressure next to any constriction causes prolapse of the mucosa and its contents. To diagnose chronic rhinosinusitis there has to be fulfilled two major or one major and two minor criteria. Signs and symptoms must be present for 12 consecutive weeks to qualify for diagnosis of chronic rhinosinusitis.

Endoscopic sinus surgery. These days, ethmoidal polypi are removed by endoscopic sinus surgery more popularly called *functional endoscopic sinus surgery* (FESS). It is done with various endoscopes of 0°, 30° and 70° angulation. Polypi can be removed more accurately when ethmoid cells are removed, and drainage and ventilation provided to the other involved sinuses such as maxillary, sphenoidal or frontal.

Complications of FESS is divided into Nasal, orbital and intra cranial. Intra nasal synechia is found to be the most common complication in various studies. In our study intra nasal synechia was the most common complication and no major complication was seen.

CONCLUSION

1. We conclude that over all success rate of our surgery came out to be approximately of 85%. We can say that FESS is the mainstay treatment of chronic rhinosinusitis.
2. Complications are minimal in the hands of experienced surgeon.
3. The preoperative NCCT PNS of patient not only gives the clear picture of disease but also provide us with the road map of surgery.

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