

Image Guided/Navigation FESS In GMC&AH, Rajouri: Our First Experience from Pir Panjal Region of Jammu Division

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Abstract

Introduction: Image guided or Navigation FESS is like GPS which helps surgeon to identify structures with more certainty. **Objective:** The purpose of the present paper is to describe our first experience of Navigation FESS in GMC & AH, Rajouri which is hilly region of Jammu division, also known as pir panjal range. **Material and Methods:** This descriptive prospective case analysis was done on patients admitted in GMC&AH with diagnosis of uncomplicated CRS with /without polyposis who needed sinus surgery and in whom Navigation FESS was performed. Navigation protocol CT scan was done before surgery .Navigation FESS using navigation technology was done. Intra and post operative complications were noted. **Results:** Cases included equal number of male and female patients. Majority of patients were CRS with polyposis. Lund Mackey pre operative CT score ranged from 2 to 12. No major intra or post operative complication was observed.

Keywords: Navigation, FESS, CT Score.

INTRODUCTION:

FESS is a challenging procedure because of risk to injury to neighbouring vital areas e.g skull base, optic nerve, carotid artery. Also it is difficult to perform in revision cases, frontal sinus diseases, extensive inflammatory disease and anatomical variations. Navigator system for FESS is helpful in above mentioned situations(1). Navigation represents a surgical concept and is used to a surgical planning and approach. With the use of reference points and the principles of triangulation, any point in space can be localized. Surgeon without losing way can identify the position of instrument using

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navigation (2). Earlier Navigation machine was available in limited number of medical college in India but nowadays it is available in remote and hilly regions of Jammu and Kashmir like our government college Rajouri.

MATERIAL AND METHODS:

This prospective study was done in department of ENT&HNS, GMC Rajouri in patients who were operated for Chronic Rhinosinusitis using Navigation system from December 2021 to December 2022. The demography, clinical diagnosis, pre operative Lund Mackey score and major post operative complications were recorded and tabulated.

RESULTS:

Summary of patients is tabulated in table 1 with male and female both 3 in number and LundMackey score ranging from 2 to 12 and no major post operative complication noted.

Table 1: Summary of cases

Diagnosis	Age in years/Sex	Lundmacky score(Right/Left)	Post operative complication
CRS with polyposis	30/Male	12/12	Nil
CRS with polyposis	50/Female	6/6	Nil
CRS with polyposis	42/Female	7/8	Nil
CRS with polyposis	18/Female	12/8	Nil
CRS with polyposis	62/Male	12/10	Nil
CRS without polyposis (mainly frontal disease)	16/Male	4/2	Nil

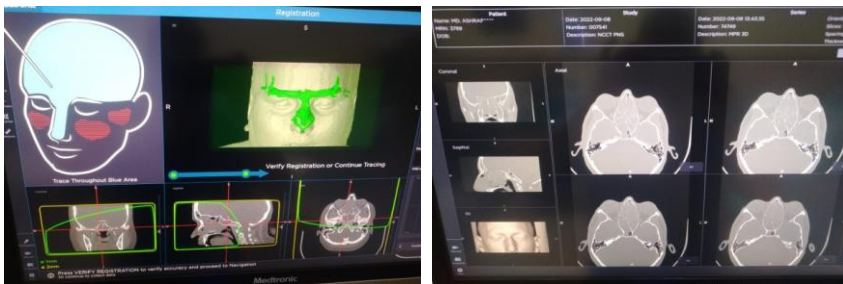


Figure 1: Showing registered area in green colour (leftside) and loaded navigation protocol CTscan (right side).

DISCUSSION:

Image guidance or navigation system allows more precise and confident identification of specific anatomic sites during FESS. Our paper on navigational FESS is the first experience in GMC & AH, Rajouri located in pirpanjalbelt which is hilly region of jammu division in J&K. Study done by Sajid Majid Qazi was the first experience from Kashmir valley in image guided Endoscopic sinus surgery(3). Most of the patients in present study were uncomplicated CRS with polyposis. Among operative CRS patients only those CRS patients were included in the study in which Navigation system was

used .Reason for using navigation was either pansinusitis or frontal disease. Also for increasing surgical experience in using navigation technology.Navigation protocol CT scan as described by Medtronic was done and loaded in navigation system(4).Pre operative Lund Mackey CT score was used in scoring sinus disease. The Lund Mackey scoring system is most widely used and was recommended by American Academy of Otolaryngology-Head and neck surgery Task Force on Rhinosinusitis for further outcomes research(5,6,7,8).In using Navigation system, it takes few more minutes for registration etc but overall operativetime was more or less same.Post operative merocel pack was kept in nasal cavity and was removed in first few post operative days.No major complication occurred during or after surgery.In study done by Sau-Tung Chu there was zero complication rate, if bleeding is excluded in his analysis(2).

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