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Research Article

**COMPLICATIONS OF FUNCTIONAL ENDOSCOPIC SINUS
SURGERY**Dr Iram Akbar Khan¹, Dr Bazgha Muneer², Dr Rabia Javed¹¹Rawalpindi Medical University.**Article Received:** October 2020 **Accepted:** November 2020 **Published:** December 2020**Abstract:**

Introduction: Functional endoscopic sinus surgery is regarded as an invasive technique used in the surgical fraternity to restore patients' sinus ventilation as well as returning to normalcy.

Objectives: The main objective of the study is to analyze the complications of functional endoscopic sinus surgery in Pakistani population.

Material and methods: This descriptive study was conducted in Rawalpindi Medical University during January 2019 to June 2019. The data was collected from 200 patients. After the surgery the patients were followed postoperatively and checked for both minor and major complications, and their experiences at large.

Results: 3 month post-operative endoscopic sinus surgery operation follow up findings from hospital. All the data is represented in table 01.

Conclusion: All together there are few cases of complications from the manipulations performed during the post-operative visits whereby the theoretical risks are equally the same as the main surgery itself. Nearly all surgeries and postoperative care are closely similar and therefore the consent given for surgery automatically includes consent for postoperative care.

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INTRODUCTION:

Functional endoscopic sinus surgery is regarded as an invasive technique used in the surgical fraternity to restore patients' sinus ventilation as well as returning to normalcy. The historical Perspective on FESS is associated with Kennedy who coined the term. Whereas endoscopic orbital decompression in reference to FESS came about by Kennedy and Michel in the early 1990s, it has come to be of great use in the modern times. In addition, enhanced visualization to significant anatomic landmarks is a critical area of decompression in optic neuropathy, has made endoscopic surgery a versatile tool [1]. The concept of FESS globally is not new, it entails the removal of tissue obstructing the Osteo Metal Complex (OMC) while facilitating drainage and conserving mucous membrane and patients' normal non-obstructing anatomy.

The concept of FESS is the removal of tissue obstructing the Osteo Metal Complex (OMC) and the facilitation of drainage while conserving the normal non-obstructing anatomy and mucous membrane [2]. The rigid fiberoptic nasal telescope provides superb intra-operative visualization of the OMC, allowing the surgery to be focused precisely on the key areas. The image can be projected onto a television monitor through a small camera attached to the eyepiece of the endoscope. Microdebriders remove the pathologic tissue while preserving normal mucosa [3]. Over the past 20 years, endoscopic sinus surgery has been widely used as a safe and effective treatment for Para Nasal Sinus (PNS) disorders. Powered instrumentation and stereotactic image-guided surgery have improved efficiency and safety of this procedure. Endoscopic

approaches to benign tumors of the nose, sinuses, anterior cranial fossa and the orbit are now becoming widely established. The combination of suction with powered dissection has revolutionized endoscopic sinus surgery [4].

Objectives:

The main objective of the study is to analyze the complications of functional endoscopic sinus surgery in Pakistani population.

MATERIAL AND METHODS:

This descriptive study was conducted in Rawalpindi Medical University during January 2019 to June 2019. The data was collected from 200 patients. After the surgery the patients were followed postoperatively and checked for both minor and major complications, and their experiences at large (Hudgins, 1993). Results showed no major complications if done by properly trained endoscopic surgeons thus three patients reported synch formation while one indicated to having per-orbital swelling. This translated to one percent of the total number of patients. The rest of the patients who underwent the surgery did not report any complications.

The data was collected and analyzed using SPSS version 19. All the values were expressed in mean and standard deviation.

RESULTS:

3 month post-operative endoscopic sinus surgery operation follow up findings from hospital. All the data is represented in table 01.

Table 01: Types of complications in selected patients of FESS

Type of Complication	Patient Population (200)	Percentage of Patients That Reported Complications
death	0	0
CSf rhinorea	0	0
Loss of vision	0	0
Loss of smell	0	0
Synech formation	3	4
Perorbital swelling	1	1

DISCUSSION:

Functional Endoscopic Sinus Surgery (FESS); Researchers over the past decades have been using endoscopic sinus surgery widely and regarded as an effective and safe mode of treatment for Para Nasal Sinus (PNS) disorders as well as related problems [5]. In order to improve efficiency and safety various endoscopic approaches to benign tumors of the

sinuses, nose, anterior cranial and the orbit are well utilized. However, the use of new technology of instrumentation has been associated with reduced number of complications [6].

Based on findings of the current study it can be argued that major complications after FESS are highly connected to the changeability of the region's

framework and the closeness of the orbits and brain. Nevertheless, of these minor complications transpires between 2 to 3 percent of cases reported. They include orbital emphysema, minor bleeding, atrophic rhinitis, eyelid ecchymosis, local infection, and temporary dysfunction of the olfactory nerves [7].

Damage to the eye or Infraorbital complications as a result of FESS procedure can be associated with loss of eye sight. In spite of direct impact to the internal eye tissues, it also affects the surrounding tissues. The location of human eye is directly next to numerous paranasal sinuses which separated by a thin bone layer [8]. The proximity which rarely happens may cause bleeding into the orbit before the performance of initial surgery hence requiring treatment before the surgery. In addition, cases of blindness and visual loss have been reported although it is extremely rare. Also, there is damage to eye movement muscles which lead to double vision Another uncommon problem is damage to the muscles that move the eye, leading to double vision, which may occur permanently or temporary [9]. However, sometimes changes may occur in the function of the tear ducts leading to excessive tearing. The closeness of the eye to sinuses presents a possibility of a major orbital complication. To others it may cause blindness all together without undergoing any surgery for individuals with refractory sinus and related infections [10].

CONCLUSION:

All together there are few cases of complications from the manipulations performed during the post-operative visits whereby the theoretical risks are equally the same as the main surgery itself. Nearly all surgeries and postoperative care are closely similar and therefore the consent given for surgery automatically includes consent for postoperative care. In modern times CSF leaks are catered for by doing regular repairs by use of nasal telescopes. However, whenever these leakages occur, surgery or additional hospitalization is recommended to patients. FESS like other surgeries dealing with sinus is regarded as the

most successful to patients having recurrent chronic sinus infections. In fact, patients having predominant symptoms towards nasal blockages, sense of smell and facial pain responds well after surgical process. All in all, if surgeries are undertaken by properly trained endoscopic surgeons the possibilities of any major complications are very minimal.

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