

An Observational Study of Postoperative Sore Throat after Surgical ExposureSheetal Sarang Patil¹, Dilip Padmakar Sambus^{2*}¹Assistant Professor, Dept of Surgery, SMBT Institute of Medical Sciences and Research Centre, Igatpuri, Nasik, Maharashtra, India²Associate Professor, Dept of Surgery, SMBT Institute of Medical Sciences and Research Centre, Igatpuri, Nasik, Maharashtra, India**Original Research Article*****Corresponding author***Dilip Padmakar Sambus***Article History***Received: 08.12.2017**Accepted: 20.12.2018**Published: 30.01.2018***DOI:**

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Abstract: Post-operative sore throat can considerably impact patients' fulfillment after the surgical procedure during post-operative period. Various factors can contribute to postoperative sore throat and the incidence can vary with the method of airway management. The present study was done to study the occurrence of the sore throat after the surgical procedure and the various factors affecting its occurrence. The study was observational prospective study conducted over a period of 12 months from September 2016 to August 2017. The type and duration of surgery, laryngeal mask airway [LMA], intraoperative airway device used (Endotracheal tube [ETT], ETT size, patient position during surgery and the grade of difficulty in intubation were noted. The patients were observed by one of the researchers' 24 hours postoperatively. They were asked whether they had a sore throat and had hoarseness of voice. Data was collected and analyzed using IBM SPSS statistics version 16. During the study period a total of 247 patients had undergone different types of surgeries in the hospital. The study had found that 60 patients (24.29%) out of 247 patients had symptoms of sore throat post-operatively and 31.8% of the patients with sore throat were also complained of having hoarseness of voice. Patients undergone more time for the surgical procedure had more incidence of the sore throat. Gynecological and other surgical procedures had shown more incidence of the sore throat than the other patients. Awareness must be increased about the sore throat and the factors affecting the occurrence of the sore throat.

Keywords: Sore throat, Surgical exposure, Postoperative.

INTRODUCTION

Postoperative sore throat is a common complication of anaesthesia. It can lead to dissatisfaction and discomfort after surgery and can delay a patient's return to normal routine activities. Many factors can contribute to postoperative sore throat and the incidence has been found to vary with the method of airway management [1].

The important aim of good anesthetic care is to achieve a secure airway and ventilate the lung in proper physiologic manner. This can be done in a number of ways, depending on the patient characteristics and nature of the surgery intended to be performed. Safe and secure airway is achieved by endotracheal and laryngeal mask airway, which is majorly performed by anesthetist and or anesthesiologist [2].

Incidence is the highest after tracheal intubation and varies from 14.4% to 50%, while after laryngeal mask airway insertion the incidence has been found to vary from 5.8% to 34% and it is much less

when a face mask is used for the maintenance of anaesthesia[1].

The present study was done to study the occurrence of the sore throat after the surgical procedure and the various factors affecting its occurrence.

MATERIALS AND METHODS

Patients undergoing surgical treatment were included in the present study

Inclusion criteria

- All the patients above 18 years undergoing surgical procedure under general anesthesia at the hospital during the study period were included in the study.

Exclusion criteria

- Patients having a sore throat preoperatively.
- Patients unable to communicate with the researchers.
- Patients undergoing emergency surgical procedures.

The study was observational prospective study conducted over a period of 12 months from September 2016 to August 2017. Other relevant information was recorded on a standardized form. The approval of the ethical committee was taken before start of the study and routine informed consent was also taken for the study.

The type and duration of surgery, laryngeal mask airway [LMA], intraoperative airway device used (Endotracheal tube [ETT], ETT size, patient position during surgery and the grade of difficulty in intubation were noted.

The patients were observed by one of the researchers' 24 hours postoperatively. They were asked whether they had a sore throat and had hoarseness of voice. Data was collected and analyzed using IBM SPSS statistics version 16.

RESULTS

During the study period a total of 247 patients had undergone different types of surgeries in the hospital. The mean age of the patient's undergone surgeries was 43 years. Out of the total patients, 142 were female patients. The study had found that 60 patients (24.29%) out of 247 patients had symptoms of sore throat post-operatively and 31.8% of the patients with sore throat were also complained of having hoarseness of voice. Patient's undergone endotracheal intubation had more incidence of sore throat (26.9%), while only 4.8% of patients with laryngeal mask airway had a sore throat. (Table 1)

Sore throat was more commonly seen in the older age group patients and also more commonly in females. Duration of the surgical procedure also shown to had effect on the occurrence of the sore throat and the patients undergone more time for the surgical procedure had more incidence of the sore throat. Gynecological and other surgical procedures had shown more incidence of the sore throat than the other patients. (Table 2)

Table-1: Distribution of the patients according to the age of the patients

Age (Years)	No	Yes	Total
18-30	34	4	38
31-40	53	13	66
41-50	37	17	54
51-60	43	9	52
>60	20	7	27
Total	187	60	247

Table-2: Occurance of the sore throat according to the surgical procedure

Type of surgery	No	Yes	Total
Hysteroscopy	9	1	10
Laparoscopic cholecystectomy	28	8	36
cesarean section	20	3	23
tissue excision	21	6	27
prostatectomy	12	1	13
urethroplasty	8	2	10
Hernia repair	17	7	24
Abdominal Hysterectomy	8	4	12
Laprotomy	2	0	2
Other Gynaecological surgery	30	12	42
Other General Surgery	32	16	48
Total	187	60	247

DISCUSSION

Sore throat is a well-recognized complication after general anaesthesia. The method used for airway management has the strongest influence on its incidence[1].

Postoperative sore throat is a minor but common postoperative complaint with an estimated

incidence of 14.4% to 61.3%. Numerous factors contribute in the causation of sore throat like gender, age, type of muscle relaxant used, gynaecological surgery, ET tube size, cuff design, high cuff pressure, smoking habit and duration of surgery[3].

A major cause of discomfort and pain in wounds is the inflammation of surrounding tissue due to

tissue damage. The mechanical irritation of the pharyngeal and tracheal mucosa occurs during laryngoscopy, throat pack placement, the endotracheal tube cuff and during the process of intubation and extubation. Other factors contributing to sore throat include large tracheal tube size, cuff design, increased intra-cuff pressure, use of succinylcholine and prolonged laryngoscopy [4].

Conway *et al.* [5] and Hartsell and Stephen [6] found that the incidence of sore throat doubled when a nasogastric tube was used [4].

The method of airway management is an important factor in causation. ET intubation is commonly performed under direct laryngoscopy using Macintosh laryngoscope. To visualize glottis with this laryngoscope, a forward and upward force is applied on the handle of the laryngoscope to align visual, oral, pharyngeal and laryngeal axes. The force is also transferred to the arytenoid cartilages of the larynx and may damage the mucosa of delicate airway that may cause trauma to the glottis resulting in sore throat[3].

It is hypothesized that sore throat is mediated by an aseptic inflammatory process caused by the removal of protective mucous from the pharyngeal and tracheal mucosal surface.

CONCLUSION

The occurrence of the sore throat with or without hoarseness of the voice is the common finding after the anesthetic surgical procedure. The type of the anesthesia method used, duration of the anesthesia and other operative factors had influence on the occurrence of the sore throat.

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