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Original Research

Retrospective assessment of complications of general anesthesia in patients undergoing surgical procedures

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ABSTRACT

Background: The surgeon should have an understanding of basic general anesthesia principles. Hence; the present study was undertaken for assessing the complications of general anesthesia in patients undergoing surgical procedures. **Materials & methods:** Screening of data records of a total of 1853 patients was done who underwent various surgical procedures during general anesthesia during one year time. Among these patients, aaesthetic complications were present in 136 patients. Complete medical and clinical of all the patients were obtained from record files. A separate Performa was made for recording and segregating the postoperative complications occurring due to administration of general anesthesia. All the results were recorded and analyzed by SPSS software. **Results:** The most common anesthetic complication observed in the present study was postoperative pain, found to be present in 40.44 percent of patient population. Nausea and vomiting were found to be present in 33.09 percent of the patient population. Sore throat and anaphylaxis were found to be present in 17.65 and 7.35 percent of patient population. **Conclusion:** Both the anesthesiologist and the surgeon should be aware of potential complications that can occur in patients schedule to undergo surgical procedures under general anesthesia.

Key words: Anesthesia, Complications, Surgical

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INTRODUCTION

The surgeon should have an understanding of basic general anesthesia principles. The primary goal of general anesthesia is rendering a patient unconscious and unable to feel painful stimuli while controlling autonomic reflexes. Surgeries can be classified as elective, semi-elective, urgent, and emergent.[1- 3] Elective surgeries do not involve a medical emergency and can be scheduled in advance. Semi-elective surgeries are done to preserve a patient's life but do not need to be performed immediately. Patients undergoing surgical procedures that require deep relaxation for long periods of time are best suited for general anesthesia as long as there are no contraindications.[4, 5] Surgeries that are unable to be adequately anesthetized with local or regional anesthesia require general anesthesia.[6, 7] Hence; under the light of above mentioned data, the present study was undertaken for assessing the complications of general anesthesia in patients undergoing surgical procedures.

MATERIALS & METHODS

The present study was conducted in the department of general anesthesia and it involved retrospective evaluation of complications of general anesthesia in patients undergoing surgical procedures. Screening of data records of a total of 1853 patients was done who underwent various surgical procedures during general anesthesia during one year time. Among these patients, segregation of data of record of patients was done, which showed presence of any post-surgical anesthetic complications. Total sample size in the present study came to be 136. Ethical approval was obtained from the ethical committee of the institution. Exclusion criteria for the present study included:

- Diabetic patients,
- Hypertensive patients,
- Patients with history of any other systemic illness

Complete medical and clinical of all the patients were obtained from record files. A separate Performa was made for recording and segregating the postoperative complications occurring due to administration of general anesthesia. All the results were recorded and analyzed by SPSS software. Chi- square test was used for assessment of level of significance.

RESULTS

In the present study, screening of data records of a total of 1853 patients was done who underwent various surgical procedures during general anesthesia during one year time. Among these patients, segregation of data of record of patients was done, which showed presence of any post-surgical anesthetic complications. Total sample size in the present study came to be 136. The most common anesthetic complication observed in the present study was postoperative pain, found to be present in 40.44 percent of patient population. Nausea and vomiting were found to be present in 33.09 percent of the patient population. Sore throat and anaphylaxis were found to be present in 17.65 and 7.35 percent of patient population. Respiratory problem, cardiovascular problem and nerve injury were found to be present in 4.41, 2.20 and 1.47 percent of patient population. Anesthetic complications were found to be present in 73 males and 63 females.

Table 1: Complications of general anesthesia

Complications	Number of patients	Percentage of patients
Postoperative pain	55	40.44
Nausea and vomiting	45	33.09
Sore throat	24	17.65
Anaphylaxis	10	7.35
Respiratory problem	6	4.41
Cardiovascular problem	3	2.20
Nerve injury	2	1.47

Graph 1: Complications of general anesthesia

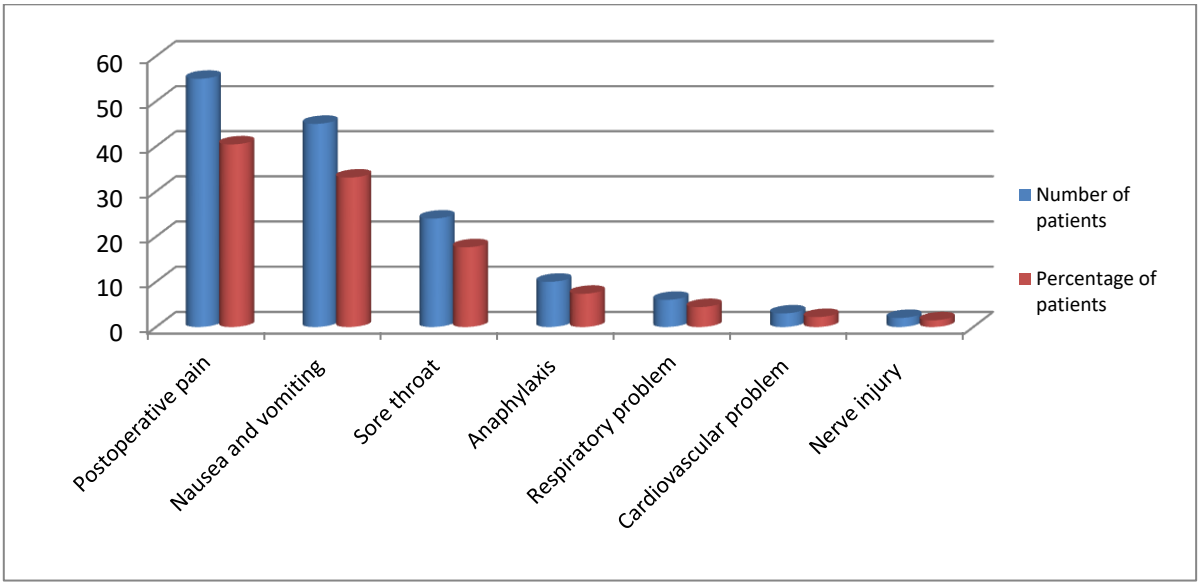

Table 2: Distribution of patients with complications divided on the basis of gender

Parameter	Gender		p- value
	Males	Females	0.45
Anesthetic complications	73	63	

DISCUSSION

There are 5 main classes of anesthetic agents: intravenous (IV) anesthetics, inhalational anesthetics, IV sedatives, synthetic narcotics, and neuromuscular blocking drugs. Each of the classes has particular strengths and weaknesses in attaining the primary goal of general anesthesia. Knowing these characteristics as well as key side effects can prove beneficial for surgeons.[8] Hence; under the light of above mentioned data, the present study was undertaken for assessing the complications of general anesthesia in patients undergoing surgical procedures.

In the present study, screening of data records of a total of 1853 patients was done who underwent various surgical procedures during general anesthesia during one year time. Among these patients, segregation of data of record of patients was done, which showed presence of any post-surgical anesthetic complications. Total sample size in the present study came to be 136. The most common anesthetic complication observed in the present study was postoperative pain, found to be present in 40.44 percent of patient population. According to a calculation based on data from 56 member states of the World Health Organization (WHO), some 230 million major surgical procedures are being carried out under anesthesia worldwide every year. In the industrialized nations, the estimated perioperative complication rate is 3% to 16%; in 0.4% to 0.8% (about 1 million patients) of all cases the result is lasting damage or death.[9]Neurologic complications related to anesthesia are infrequent but can be serious. Neurologists are often consulted to evaluate patients with postoperative symptoms and must be ready to discriminate those truly caused by the anesthetic drug or procedure from the more common postoperative complications that are unrelated to the anesthesia itself.[10]Side effects are common with the administration of general anesthesia. These can include transient confusion or memory loss, dizziness, urinary retention, nausea, vomiting, chills, and sore throat. Older, sicker patients undergoing lengthy procedures are at increased risk of serious complications including persistent confusion, memory loss, heart attack, pneumonia, thromboembolism and cerebrovascular accident. Death as a result of general anesthetic is rare and estimated to be approximately one in 150,000.[11, 12]

In the present study, Nausea and vomiting were found to be present in 33.09 percent of the patient population. Sore throat and anaphylaxis were found to be present in 17.65 and 7.35 percent of patient population. Respiratory problem, cardiovascular problem and nerve injury were found to be present in 4.41, 2.20 and 1.47 percent of patient population. Anesthetic complications were found to be present in 73 males and 63 females.Anesthesiologists should fully inform patients of the possible complications from anesthesia. For rapport with the patient, with whom they usually have no acquaintance until a day or so before an operative procedure, the anesthesiologist should enlist the help of the internist or surgeon who already has established an atmosphere of trust.A recent increase in the percentage of older and multimorbid patients among persons undergoing surgery, along with the advent of newer types of operation that would have been unthinkable in the past, has led to an apparent rise in anesthesia-associated mortality, even though the quality of anesthesiological care is no worse now than in the past. On the contrary, in recent years, better anesthetic management has evidently played an important role in improving surgical outcomes.[10]

CONCLUSION

Under the light of above obtained results, the authors concluded that both the anesthesiologist and the surgeon should be aware of potential complications that can occur in patients schedule to undergo surgical procedures under general anesthesia. However; further studies are recommended.

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