



Original Research Article

An assessment of the patient's understanding and knowledge of the relevance of pre-anesthetic check-up

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ABSTRACT

Introduction: Pre anesthetic checkup is an important prerequisite of any surgery. Therefore the importance of a detailed pre anesthetic check-up including a thorough history and clinical examination should be known to all the patients undergoing any kind of surgery. It can be gauged by the fact that missing out even a single event like a previous drug reaction may jeopardize a precious life.

Aim: The aim of our study was to assess the understanding of the importance of a pre-anesthetic check-up (PAC) and its components amongst the population coming for elective surgeries in a tertiary care hospital in Urban India.

Materials and Methods: A prospective randomized observational study was conducted including 450 patients (18-60yrs) coming to a tertiary hospital in a metropolitan city over a period of three months. Each patient was asked to fill out a questionnaire consisting of 16 questions in Hindi (local language)/ English in the waiting area. Every question had multiple possible choices and they had to choose one most appropriate answer according to them. Every correct answer was marked 1 while an incorrect answer was given a score of 0.

Statistical Analysis: The data was expressed as percentage and frequency. The correlation tests were applied using the appropriate tests according to the latest SPSS version and included the unpaired t-tests and one way analysis of variance.

Results: Out of the 450 patients, only 21.2% had the knowledge of a pre anesthetic clinic. It was also observed that only 19.4% were aware that risk assessment is done in pre anesthetic checkup for undergoing proposed surgery. 54.6% did not know about the importance of optimization before surgery. 99.2% desired to receive information about anesthesia before experiencing.

Conclusion: Despite the improved literacy rate, there is a dearth of knowledge about the importance of the pre-anesthetic checkup (PAC) clinic visit before an elective surgery and the role of an anesthesiologist in the perioperative period.

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1. Introduction

The discipline of anesthesia has evolved and taken huge leaps in the last few decades. Anesthesiology is not merely limited to the operation theatres anymore, but revolves around many aspects of patient care like critical care,

pain clinics, labor analgesia, remote areas like the MRI, CT scans, etc.¹ With the advent of modern techniques of anesthesia administration and monitoring, it has become much safer as well.² However, the major factor in reducing peri-operative morbidity and mortality is not equipment and infrastructure, but a detailed Pre-anesthetic checkup (PAC) by a qualified Anesthesiologist and the maximal optimization of each patient preoperatively.³ The

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importance of a thorough Pre-anesthetic assessment has been emphasized time and again.⁴⁻⁶

The unfortunate picture reflected in many studies published in developing countries depicts the ignorance of the purpose of revealing a detailed history of all ailments, past and present by the patients. This might put their lives at risk while undergoing even minor surgical procedures and become an anesthesiologist's worst nightmare including death and medico legal complications.⁷

However, with the improving literacy rates and online information available round the clock, we hope that the patients are better aware of the role of anesthesia, the Anesthesiologist and thus the importance of PAC.^{8,9} Hence, this study was conducted to assess the present level of knowledge among patients about the importance of Pre-anesthetic checkup.

2. Materials and Methods

We conducted this observational prospective study in a Tertiary care multi-specialty hospital in a metropolitan city in India over a period of 3 months. A total of 450 patients planned for elective surgeries visiting the PAC clinic were enrolled in the study. Patients of either sex, aged between 18-60 years, who could read and understand English and/or Hindi (local language) were included. Participation was completely voluntary and the patients were assured of their confidentiality. After an informed consent, they were given a questionnaire consisting of 16 questions in either of the languages (Table 1) in the waiting area before visiting the PAC clinic. Unwilling, cognitively impaired, and those who could not read English and/or Hindi were excluded from the study.

The patients were explained in detail how to complete the questionnaire. They were asked to mark the single most appropriate correct answer according to them out of the multiple options provided for each question.

An option of don't know was also provided with most questions. Scoring was done with each question answered correctly being given 1 mark while incorrect answer was awarded 0 marks. Patients giving don't know as answer, were also awarded 0 marks.

The entire questionnaire was to be completed in the waiting area before entering the PAC clinic.

2.1. Statistical analysis

The collected data from the questionnaire was entered in MS excel sheet and was expressed as percentage and frequency. Correlation studies were performed by unpaired t test and one-way analysis of variance using SPSS version 21 (Statistical packages for the social sciences) to study the effect of variables like age, sex, literacy level, and previous visit to PAC clinic on patient's knowledge and understanding of pre-anesthetic check up. $p < 0.05$ was

considered statistically significant.

3. Results

3.1. Patient characteristics

A total of 450 patients aged between 18-60 years, coming to pre anesthesia clinic answered the questionnaire. All the questionnaires were completely filled.

3.2. Demography

About 53.3% of our study population belonged to the age group of 18-40 years while the rest 46.7% were 41-60 years old. Out of total participants, 57.33% were males.

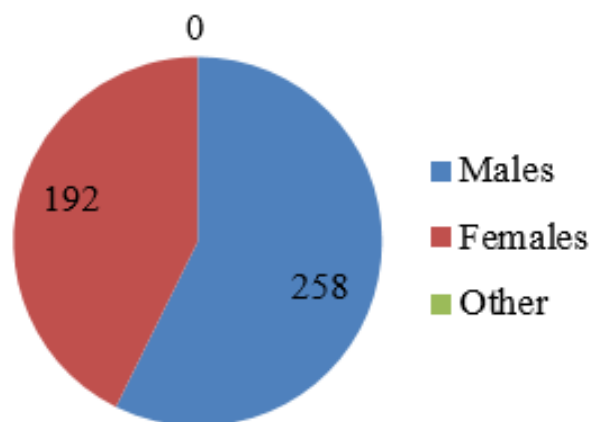


Fig. 1: Distribution according to sex.

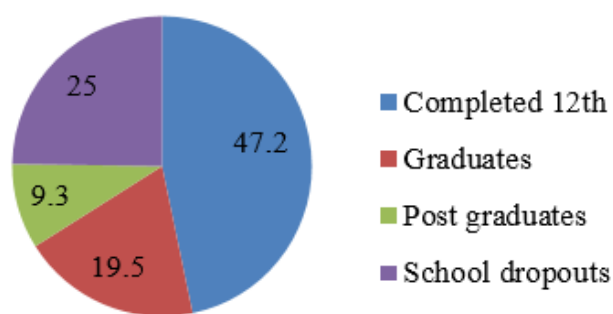


Fig. 2: Distribution according to educational qualifications.

3.3. Educational status

47.2% of our patients had completed school while only 19.5% were graduates. 9.3% of the patients were postgraduates and the rest 25% were school drop outs. We could not assess the knowledge of illiterate people in our study population as the persons unable to read or understand

Table 1: Questionnaire (English Version)

Age:	Gender:
1. Have you ever been to pre anesthetic clinic before?	a). Yes
2. Why have you come to pre anesthetic clinic?	b). No
3. Have you had any anesthetic exposure in the past?	a). To follow the surgeon's instructions
4. What is done in pre anesthetic clinic?	b). To get the date for surgery
5. Do you think Pre anesthetic checkup is necessary before surgery?	c). For pre anesthetic assessment
6. Who will do your Pre anesthetic checkup?	d). Don't know
7. Do you think it's important to reveal all your medical history to the anesthesiologist?	a). Yes
8. Why do you think laboratory and radiological tests are ordered in Pre anesthetic check-up?	b). No
9. Do you think it is important for other medical conditions to be optimized before giving anesthesia?	a). Anesthesiologist
10. Do you think all the tests and examination done in the pre anesthetic clinic are necessary?	b). Surgeon
11. Why do you think your mouth, teeth, neck and spine are being examined in the pre anaesthetic check-up?	c). Sister/ Technician
12. Why do you think you are asked about substance abuse like smoking, alcohol, drugs, etc. in the pre anesthetic check- up?	d). Don't know
13. If I have ever been allergic to any drug or substance, is it important for me to inform the person doing my pre anesthetic checkup?	a). Yes
14. Have you ever been given any information about the type of anesthesia by anyone that may be given to you?	b). No
15. Would you like to receive some information about anesthesia before experiencing it?	a). Yes
For women of reproductive age group:	b). No
16. Is it important to inform about pregnancy /missed periods (at present):	a). Yes
	b). No

the proforma were excluded from the study.

3.4. Knowledge about PAC clinic

45.5% of the patients had already visited the PAC clinic earlier and 54.5% were visiting the PAC clinic for the first time. A striking 46.7% of the patients felt that they had come to the PAC clinic merely because their treating doctor advised so. 29.6% of the population thought this is the place where the date for the scheduled surgery is provided. Only 21.2% actually knew that the PAC clinic is for a thorough pre anesthetic assessment while the rest 3.5% had no idea why they were at the PAC clinic.

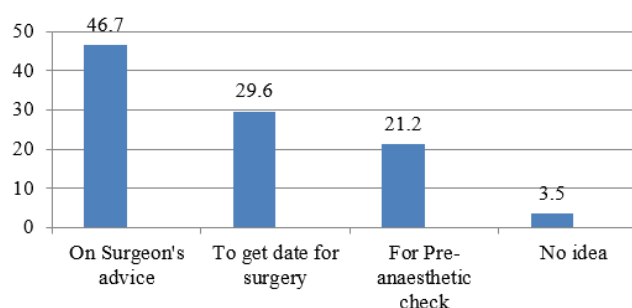


Fig. 3: Percentage distribution about knowledge of PAC visit.

3.5. Awareness about pre anesthetic check-up and anesthesiologist

Only 19.4% of our patients were aware that the assessment for any risks to them is being done in the pre anesthetic check-up for undergoing the proposed surgery under anesthesia while a majority of 48% thought it was just a routine check-up before surgery. 29% of the population thought this is the place where the date for the scheduled surgery is provided while the rest 3.6% had no idea why they were there. 26% of the patients had some kind of anesthetic exposure in the past. 23.5% of the study population knew that the PAC was being done by an anesthesiologist. 15.5% did not even know the Anesthesiologist sitting in the PAC clinic is a doctor. Unfortunately, 33 % of the patients felt it is the surgeon who does the pre anesthetic checkup.

Despite the majority being unaware of the importance of a detailed PAC, 66% of the patients felt that pre anesthetic assessment is necessary irrespective of the reason.

3.6. Importance of medical, drug and allergy history in PAC

57.2% of the patients considered it necessary to reveal only those medical conditions which were bothering them at that point of time. Only 15.6% thought it was relevant to furnish information about all previous and co-existing medical ailments.

About 17.7% of the patients knew the role of laboratory and radiological tests to find out any hidden medical issues which might increase the risks during surgery while 19.2% thought that it leads to an unnecessary delay in surgery. A surprising 64.1% thought that not all investigations done at the PAC clinic are relevant.

Also, 39.4% of the patients thought the history about substance abuse like smoking, alcohol, drugs, etc was important as it could increase the risk to the patient's life during anesthesia and surgery. The majority felt it was part of giving advice for quitting bad habits.

Less than half (43.6%) of the study population considered it important to furnish previous drug/food allergy history.

Further, the importance of revealing history of missed periods or pregnancy was realized by 77.5% of the study population.

3.7. Importance of optimisation of medical issues before surgery

A little over half of our study population (54.6%) believed that there was no need of optimization of their other medical conditions (not related to surgery).

3.8. Relevance of airway/spine examination in PAC

When asked why they think the mouth, teeth, tongue, neck and spine examination is done during the PAC, 46.5% reported it is to look for any disease in those areas as well. Only 11% of the participants were aware that there might be any difficulty in giving anesthesia as these are the regions from where anesthesia is given. The rest thought this was part of a routine checkup.

It was further noteworthy that 65% of the patients reported they had never received any information regarding anesthesia before. Also, 99.2% said they would like to receive some information about anesthesia before experiencing it.

4. Discussion

The importance of a detailed Pre anesthetic evaluation before any surgery cannot be undermined. Kluger et al. examined the Australian Incident Monitoring Study database and showed that out of 6271 reports, 478 had incorrect preoperative assessment while 248 had inadequate preoperative preparation.^{7–9} Thus, for a safer perioperative environment, the knowledge of the importance of PAC is a must.^{10,11}

Our study included patients with the basic literacy level of being able to read and/or write in the local language (Hindi in our study). Also, the study was conducted in urban population. This could be a possible reason, the percentage of people aware about the PAC clinic in our study is higher than other studies like the one conducted by Singla et

al.¹² which was conducted in rural population and included even the illiterate patients coming to the clinic. We could not assess the knowledge of illiterate people in our study population as the persons unable to read or understand the questionnaire were excluded from the study.

No significant correlation was found between gender of the patient and knowledge of pre anesthesia check-up. Our results were similar to the study by Gurunathan and Jacob¹³ regarding public perception of the anesthesiologist in India. Similarly, in a study by Sağın et al.¹⁴ conducted in Turkey, though women showed higher knowledge of anesthesia, the results were not statistically significant.

In our study, education and previous experience of pre anesthesia assessment had significant impact of on the knowledge of anesthesia and both were found to be directly related. These results were similar to the study by Baaj et al.¹⁵ and by Singla and Mangla.¹²

Similarly, in a study by Swinhoe CF¹⁶ et al, patients were assessed pre-operatively for their knowledge with regard to anesthetic qualifications, anesthesia and the role of anesthetists. 35% did not realize that anesthetists were qualified doctors and only 25% could mention any duties that anesthetists might have outside the operating theatre.

There were a strikingly higher proportion of participants who believed unnecessary investigations are being done in the PAC clinic similar to results by Bruce et al.¹⁷ Many of them even believed that PAC leads of unjustified delay in procuring the date for proposed surgery. We strongly recommend a closed communication link of the patient not only with the anesthetist but also with the operating surgeon in this regard.¹⁸ As the patient's primary caregiver in the peri operative period, the surgery team should emphasize on the importance of each and every component of PAC and Anesthesia.

A study from India by Haq et al² showed that 88 out of the 3973 patients i.e. 2.2% screened at PAC had a newly diagnosed co-morbid illness. They concluded by stating that PAC can detect undetected co-morbid illness in population poorly exposed to healthcare in countries like India which can impact perioperative management.

There is a pressing need for national guidelines, designed and tailored according to the disease profile of the Indian patients.¹⁹ The guidelines must involve all stakeholders including anesthesia and surgery professionals.²⁰ It would be desirable if they were standardized to be universally applicable across all classes of healthcare facilities in India. The value of a thorough history and physical examination is critical and cannot be replaced by 'routine' investigations.²¹

5. Conclusion

Even the urban population with basic education has inadequate knowledge about pre anesthetic checkup and its importance in improving the outcome of surgery. Hence, collective efforts should be made by anesthesiologists

and surgeons involved in patient care to emphasize the importance of Pre anesthetic checkup. This will improve the perioperative outcome of the patient and proper pre anesthetic check-up can help in identifying the co morbidities. Preoperative optimization can be done and thus decreasing the risk of developing complications. This can be done by proper counseling at the time of pre anesthetic check-up, displaying posters at surgical OPD, OTs and PAC clinics, also by showing short educational videos.

6. Conflicts of Interest

None.

7. Source of Funding

None.

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