Original Article

A Hospital-Based Observational Study to Assess the Importance of Pre-Anaesthetic Check-up and Awareness of the Role of Anaesthesiologist Among Patients at Tertiary Care Centre

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Abstract

Background: Anaesthesia is an important aspect of patient safety during surgery, maintaining physiological stability and minimising risks in the operating room. A structured Pre-Anaesthetic Check-up (PAC) is meant to accomplish the objectives of optimising patient preparation, enhancing communication, and maximising the safety of the surgery. Yet, literature and research in all parts of the world, as well as in India, reveal that patients (surgical patients) have a poor understanding of the role of anaesthesiologists and the value of PAC in a tertiary-care environment in Rajasthan, India. The present study evaluates patients' (surgical patients') awareness of the role of anaesthesiologists and the value of PAC in a tertiary care hospital in Rajasthan, India. **Material and Methods:** The study was a prospective observational study conducted over 6 months at a tertiary-care, multi-specialty hospital in Rajasthan, India. Two hundred patients referred to the PAC clinic for elective surgery were participants who provided informed consent and completed the questionnaire. A structured 17-item questionnaire (12 questions on knowledge and five demographic questions) was developed following Singla et al. **Results:** 200 respondents completed the questionnaire (53% men, 47% women). The highest age group was 31-40 years. Twenty-three percent had previously visited the PAC clinic; 77% were first-time visitors. Overall mean PAC awareness score was 0.75 ± 0.42 (73%). Awareness about the need for PAC before surgery was 86%, while knowledge of presurgical instructions was lowest at 59%. **Conclusion:** Although anaesthesiologists play an important role in ensuring patient safety in the operating room, patient awareness is insufficient. The mentioned intervention, which promotes understanding through PAC counselling, posters, and educational videos, can improve compliance and lead to safer surgical outcomes.

Keywords: PAC, Anaesthesiologists, Elective Surgeries, Questionnaire.

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Introduction

Anaesthesia is crucial to ensure the safety of surgical procedures by maintaining physiological stability and reducing risks throughout surgery. It is dependent on a patient's preoperative health condition, and thus an adequate pre-anaesthetic examination is critical for providing the best perioperative care.[1]

The pre-operative assessment is meticulous, aimed at determining comorbidities, perioperative risk estimates, and the optimal anaesthetic method. Assessment of patient anxieties is another role of pre-anaesthesia consultation (PAC), where patient anxieties can be discussed and counselled about, with basic advice and information given, unlike the in-depth counselling that may be achieved by other methods of addressing the anxieties that are likely to be faced during the peri-operative phase. Despite these measures being designed to minimise perioperative risk, the final results depend on factors that cannot be guaranteed. Moreover, anaesthesiologists describe the perioperative procedure, schedule post-surgery treatment, and, if required, delay surgeries to ensure patient safety. They are experts in conducting a pre-anaesthesia evaluation (PAE), which can be used to improve operating room efficiency, reduce surgical delays, and enhance overall patient care.[2]

Anaesthetists ought to evaluate, long before hand, patients who intend to undergo elective operations, with a view to strategising ideal preparations and perioperative care in line with the requirements of their anaesthetic procedures. The primary goals of the Pre-anaesthetic Check-up (PAC) include identifying the appropriate anaesthetic methods to be employed during the surgical procedure, providing optimal perioperative care, and obtaining informed consent to anaesthesia.[3,4] In the Pre-anaesthetic Check-up (PAC), individual risk factors about the planned surgery should also be identified. A comprehensive PAC

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with a bonus for patient satisfaction is more likely to lead to improved patient outcomes.[5]

As the daycare surgery phenomenon, with the growing popularity of healthcare accessibility, increases, PAEs may play a larger role in surgical planning and patient protection, yet additional research is required to confirm the wisdom of its long-term effects. The proper performance of PAE in adult surgical patients is based on patient awareness and understanding, which may enhance communication, consent, and adherence to perioperative recommendations. Research has indicated that there is a lack of awareness of PAEs in both developed and developing countries.[6-8]

Several studies have been conducted on the awareness of the roles of anaesthetists and PACs among rural patients and the general population in the northern parts of India.[6,9] They have demonstrated that the patients visiting PAC clinics lack awareness of the values of pre-anaesthesia assessment and the role of PAC in improving the surgical outcome.[6] The study was devoted to testing the level of awareness of the patients visiting PAC clinics about the role of anaesthetists during the perioperative period and the role of PAC in enhancing the surgical outcome.

The purpose of a structured Pre-Anaesthetic Check-up (PAC) is to maximise patient preparation, improve communication, and increase safety to enhance the ability to operate. Nevertheless, existing literature in the world and within India dictates poor patient knowledge on the role of anaesthesiologists and the significance of PAC in a tertiary care environment in Rajasthan, India.

This paper aims to evaluate the understanding of adult surgical patients regarding the roles of anaesthesiologists/ PAC and the value of these roles in a tertiary care unit in Rajasthan, India.

Materials and Methods

The study was a prospective observational study conducted over six months at a tertiary-care, multi-specialty hospital in Rajasthan, India. Two hundred patients referred to the PAC clinic for elective surgery were identified, and informed consent was obtained from each.

This was a cross-sectional survey of 200 patients and their attendants who had frequented the PAC clinic.

Inclusion criteria: adults between the ages of 18 and 60 Years, who can understand English /Hindi, and are willing to participate.

Exclusion criteria: mental restriction, lack of ability to understand the questionnaire, or lack of desire to participate.

A structured questionnaire comprising 17 items (12 knowledge-based questions and five demographic items), adapted from the study by Singla et al., was used. To include illiterate respondents, trained staff read the questions aloud using neutral, non-leading communication. Correct responses were scored as 1, and incorrect responses were scored as 0.

The questionnaire was available in Hindi and English. Trained personnel assisted illiterate participants after receiving thorough orientation on research ethics, neutral communication techniques, and methods to ensure participants' understanding without influencing their responses. Each question was read individually in the participant's preferred language, and standardised, non-leading explanations were provided when required.

The questionnaire was based on the tool developed by Singla et al. Although it is not a strictly standardised instrument, it has been used in other healthcare settings in India. To enhance validity, a panel of senior anaesthesiologists reviewed the questionnaire and pilot-tested it for clarity and contextual applicability before full-scale implementation.

Results

The questionnaire was completed by all 200 respondents (53% male, 47% female). The 31-40-year-old group was the most significant (42%). Approximately 45 percent were graduates, 45 percent had primary/secondary schooling, and 10 percent had no formal education [Table 1].

Twenty-three percent of them had been clients of the PAC clinic before; the remainder of them were first-time visitors.

The role awareness of the anaesthesiologist ranged [Table 2]:

- 100% of the respondents were aware that anaesthesia put patients to sleep.
- 78 percent were aware that they manage intraoperative pain.
- 27 percent were aware that they handle postoperative pain.

Regarding their role in ICU care, 10 percent mentioned it.

The average PAC awareness was 0.75, with a standard deviation of 0.42 (73%). Awareness of the need for PAC before surgery was 86% and lowest awareness was regarding preoperative instruction (59%). [Table 2].

Awareness levels:

- Truly aware: 10%
- Probably aware: 68%
- Unaware: 22%.

Table 1: Demographic variations of study participants

Descriptive variable	n(%)
Gender	
Male	106(53%)
Female	94(47%)
Age group (years)	
≤20	2(1%)
21-30years	46 (23%)
31-40years	84(42%)
41-50years	38 (19%)
51-60years	30 (15%)
Mean ± SD	37.56±11.24
Occupation	
Business	52(26%)

Government employees	24 (12%)
Farmers	44 (22%)
Skilled laborers	12 (6%)
Unskilled laborers	68(34%)
Education	
No education	20 (10%)
Primary school	40 (20%)
Secondary school	50 (25%)
University graduate	90 (45%)
Residential Area	
Urban	102(51%)
Rural	98(49%)
PAC clinic	
Ist visit at clinic	154 (77%)
More than one visit	46 (23%)

Table 2: Role of anaesthesiologist during surgery (Q-17)

Role of anesthetist during surgery	**Yes n(%)**	**No n(%)**
Performing the surgery	0	200(100%)
Ensuring you not feel pain	156(78%)	44 (22%)
Monitoring vital signs of patients	92(46%)	108(54%)
Putting people to sleep during surgery	200(100%)	0
Giving pain relieving medications after surgery	54 (27%)	146(73%)
Managing patients in ICU	20 (10%)	180(90%)
Scoring	**(n,%)**	
Role of anaesthetist during surgery (n,%)		
Unaware (0-1)	44 (22%)	
Probably aware (2-4)	136(68%)	
Truly aware (>4)	20 (10%)	
Total	200(100%)	

Discussion

A comprehensive PAC will be vital to curb the perioperative complications. Even though the need to improve awareness of the necessity of PAC was not that low, there was still a lack of knowledge about the full responsibilities of an anaesthesiologist. This is in line with previous research in India and elsewhere, which also indicates inadequate public awareness of the availability of anaesthesia services.

The level of education and prior exposure to PAC played a major role in enhancing patient knowledge, as observed in previous literature. No gender-based differences were found. Lack of awareness may also lead to poor compliance with instructions and, in turn, inappropriate preoperative optimisation. Systematic counselling, illustrations, and mini-educational videos in OPDs and PAC clinics can enhance patient education.

The significance of the pre-anaesthetic evaluation, conducted in detail before any surgery, cannot be compromised. This allows knowing that even in the case of a safer perioperative environment, a clear understanding of the significance of PAC should be present (a prerequisite) because Kluger et al. analysed the Australian Incident Monitoring Study database and reported that in 6271 reports, 478 contained the incorrect preoperative assessment, and 248 contained insufficient preoperative preparation.[13,14]

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). The research was also done in the urban population. This is a potential explanation: the proportion of those who were aware of the PAC clinic in our study is greater than in other research, such as that by Singla et al,[6] which was conducted in a rural population and included illiterate patients visiting the clinic.

There was no significant relationship between the patient's gender and knowledge of the pre-anaesthesia check-up. The outcomes of our findings were similar to those of Gurunathan and Jacob,[15] regarding the perception of anaesthesiologists by the people of India. Similar to this study, a study conducted in Turkey by Sagün et al,[8] found that although women had a greater understanding of anaesthesia, this difference was not statistically significant. Anaesthesia knowledge was greatly influenced by education in our work and by our experience with pre-anaesthesia assessment and was found to be directly correlated. Such findings were comparable to those reported by Baaj et al,[11] and by Singla and Mangla.[6]

Correspondingly, in a study conducted by Swinhoe CF et al,[16] knowledge was tested preoperatively among patients regarding anaesthetic qualifications, anaesthesia, and the position of anaesthetists. 35% could not identify any roles that anaesthetists could undertake outside an operating theatre, and only 25% could say that anaesthetists were qualified doctors.

The goal of the PAC is to maximise patient care before surgery, minimising anaesthesia and surgical risks to the greatest extent possible, and achieving attractive outcomes for the patient. In addition, this means the role of an anaesthesiologist will be even harder when a patient, during PAC, appears uninterested or wants to complete it quickly. This may lead to suboptimal patient optimisation before surgery. It is established that morbidity and mortality in the operating theatre are influenced by the preoperative physical condition of the patient and the operation itself.[17] It is pleasing to note that all the study subjects attended their PAC visits as recommended by their surgeons.

Conclusion

Although anaesthesiologists are essential to ensuring patient safety in the perioperative period, their awareness is poor. The best way to guarantee safer, improved compliance, and better surgical outcomes is to enhance understanding through PAC counselling, posters, and educational videos.

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Conflicts of interest

There are no conflicts of interest.

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