

## A STUDY OF PATIENT'S PERCEPTION ABOUT PRE ANAESTHESIA CLINIC IN A TERTIARY CARE HOSPITAL OF A DEVELOPING COUNTRY

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### ABSTRACT

#### BACKGROUND

Patients, scheduled for elective surgery are referred from various surgical specialities to anaesthesiologists for evaluation before the surgical procedure. Perception and knowledge of patients regarding pre anaesthesia clinic (PAC) has not been extensively studied.

The aim of the study is to assess the knowledge of patients posted for surgery regarding pre anaesthesia check-ups and to determine the association between educational status and knowledge about pre anaesthesia clinic.

#### MATERIALS AND METHODS

After obtaining written informed consent, 300 patients of age group 18-70 years were asked to fill in a questionnaire before assessment for anaesthesia. Each question was provided with multiple choice answers and patient was asked to choose the right answer.

**Settings and Design-** This observational study was conducted on 300 patients posted for elective surgery in a tertiary care teaching hospital.

**Statistical Analysis-** Data collected was expressed as frequencies and percentage. One-way ANOVA test was done to find significant association between education status and knowledge regarding PAC (SPSS- 20).

#### RESULTS

Only 30% of the patient correctly knew the reason for coming to PAC and 18% were aware that main objective of PAC is assessment and optimization before surgery. Although approximately 70% of patients knew that they will be examined by anaesthesiologist and 30% of patients felt that they have come to get the date for surgery.

#### CONCLUSION

Patients in general do not have adequate knowledge about PAC and good communication by anaesthesiologist and surgeon can result in patient cooperation and thus better outcome.

#### KEYWORDS

Pre Anaesthesia Clinic, Anaesthesiologist, Questionnaire.

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#### BACKGROUND

In India and in many other developing countries, anaesthesiologists are poorly recognized. Many studies have demonstrated poor knowledge of anaesthesia and anaesthesiologists among general public in developing countries,<sup>1,2</sup> despite their increasing involvement in perioperative care, resuscitation, intensive care, acute and chronic pain management.<sup>3</sup> Patients who are scheduled for elective surgery are usually referred from various surgical specialities to anaesthesiologists for evaluation before the

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surgical procedure. In pre anaesthesia clinic (PAC) patients are prepared both physically and psychologically for surgery and it is ensured that they are in most favourable condition to withstand the stress of surgery.<sup>4</sup> Patients in general have poor understanding about anaesthesiologists and pre anaesthetic clinics. Such patients do not know the importance of pre anaesthesia check-up and try to fruitlessly rush through it resulting in incomplete assessment. Many a times pre-operative investigations are seen as wastage of time and money. On the other hand, some patients think that, they will be anaesthetised in pre-anaesthetic clinics. This not only undermines the purpose of pre-anaesthetic clinic but also increases perioperative morbidity and mortality. With this background in mind this observational study was conducted-

- To assess the knowledge of patients posted for surgery regarding pre anaesthesia check-ups.

- To determine the association between educational status and knowledge about pre anaesthesia clinic.

## MATERIALS AND METHODS

After approval from ethical committee this observational study was conducted in a tertiary care teaching hospital. 300 patients in the age group of 18-70 years posted for elective surgery coming to PAC clinic over a period of 3 months were included in the study. Patients unable to comprehend due to psychiatric illness or any other reason were excluded from the study. After obtaining written informed consent from each patient in his/her own language, everyone was thoroughly explained about filling up of questionnaire. The questionnaire<sup>5</sup> was made available both in English and in Hindi language. The entire questionnaire was completed before start of pre anaesthesia check-up. Initial questions (Question no 1-4) gave general information about patient like age, sex, educational status etc. In second part of questionnaire (Question no 5-15) patient's understanding regarding pre anaesthesia clinic was assessed. Questions were explained to illiterate patients and responses were obtained from them. Each multiple-choice question was provided with choices out of which patient had to choose the

most appropriate answer according to him/her. An option of don't know was also provided with most questions. Scoring was done for second part of questionnaire and each question answered correctly was given one mark. Incorrect answer was awarded zero mark.

Sl. No.	Patient Variables
1.	<b>Age</b>
	18-30
	30- 45
	45-70
2.	<b>Gender</b>
	Male
	Female
3.	<b>Education</b>
	Illiterate
	Primary School
	Secondary School
	Graduate
4.	<b>Previous Visit to PAC Clinic</b>
	Yes
	No

**Table 1. Questionnaire Regarding Sociodemographic Characteristics**

Sl. No.	Question	Response
5.	Why have you come to anaesthesia clinic?	To comply with surgeon's instructions To get date for surgery For pre anaesthesia assessment I don't know
6.	What is done in a pre-anaesthesia clinic?	General assessment of patient done before anaesthesia Some test to be performed to assess anaesthesia fitness Assessment and optimization before surgery I don't know
7.	Who can perform the preanesthetic check-up?	Nurse in PAC clinic Technician sitting in PAC clinic Anaesthesiologist in PAC clinic Don't know
8.	What is the importance of Pre-anaesthesia checkup before surgery?	Reduces the risk of anaesthesia and surgery Required to get date for surgery Legal documentation Don't know
9.	Are conditions like heart disease, breathing difficulties, renal problems have to be expressed before surgery?	Yes No Not if well controlled Don't know
10.	If there is a pre- existing medical condition does it needs to be optimized before surgery?	Yes No Not required if not related to surgical condition Don't know
11.	Are above mention conditions affecting outcome of anaesthesia and surgery?	Yes No Don't know
12.	Does habits like drinking and smoking affect outcome of anaesthesia and surgery?	Yes No Don't know
13.	Is pre-anaesthesia check-up required only when surgery is to be performed under anaesthesia?	Yes No Don't know
14.	When should you discuss your fears/queries regarding anaesthesia (if any)?	In ward with surgeon In pre-anaesthesia clinic In operation theatre Don't know

15.	Do you follow any advice you will get in a pre-anaesthetic clinic?	Yes, it is for my own good Yes, till surgery is performed Only if surgeon says so Don't know
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**Table 2. Questionnaire.<sup>5</sup> Regarding Patient's Perception of Pre Anaesthesia Clinic**

**Statistical Analysis-** Data collected was expressed as frequencies and percentage. One-way ANOVA was done to find correlation between education status and knowledge regarding PAC (SPSS- 20).

## RESULTS

Data collected was analyzed to find out patient's perception of PAC and this information was correlated with patient's educational status.

**Sociodemographic Characteristics-** A total of 300 patients aged between 18-70 years, coming to pre-anaesthesia clinic answered the questionnaire. 23% of the patients were under 30 years of age, 40.1% of patients between age group of 30-45 years and remaining were between 45-70 years of age. 52.6% patients were males and 47.6% patients were females. Out of 300 patients 28.8 % patients were illiterate, 29.8% had studied up to primary school, 36.1% finished secondary schooling and 5.6% were graduates. Regarding previous visit to PAC 42.1% of patients had visited PAC previously and the rest were coming for the first time.

Sl. No.	Patient Variables	Number	Percentage
1.	Age		
	18-30	69	23
	30-45	120	40.1
	45-70	111	37.1
2.	Gender		
	Male	157	52.6
	Female	143	47.6
3.	Education		
	Illiterate	86	28.8
	Primary School	89	29.8
	Secondary School	108	36.1
	Graduate	17	5.6
4.	Previous Visit to PAC Clinic		
	Yes	126	42.1
	No	174	58

**Table 3. Sociodemographic Characteristics**

## Patient's Knowledge Regarding Pre Anaesthesia Clinic

In reply to question why had they come to PAC clinic, only 30.1% of patients answered for pre anaesthesia assessment, while 32.3% said that they were following surgeon's instructions, rest 25.4% believed that they would be getting date for surgery there, and 12.4% patients didn't know the exact reason.

On being asked, what is done in a pre-anaesthesia clinic, 25.1% believed that preanaesthetic assessment is done; only 18.4% said that both preanaesthetic assessment and optimization is done in PAC clinic, rest 30.8% thought some test would be performed to check fitness for surgery and 25.8% did not know about it.

Surprisingly, 74.2% (Table 4) of the patients knew that anaesthesiologist perform pre anaesthesia examination, and 45.2% thought that pre - anaesthesia examination helps to reduce surgery and anaesthesia-related risk. 71.9% of patients believed that pre-existing diseases need to be informed before surgery, 67.6% said that such conditions are required to be optimized before surgery and only 54% knew that presence of such conditions might affect the outcome of anaesthesia and surgery. As far as habits like drinking and smoking are concerned only 77.3% said that these conditions might affect anaesthesia or surgery. When patients were asked if pre anaesthesia examination is required only when surgery is to be performed under anaesthesia, 35.5% of patients agreed. Similarly, 54.5% patients said that they would discuss their fears or queries regarding anaesthesia with surgeon in ward while 27.8% said that they would share such feeling in PAC clinic. Only 71.6% patients said that they follow PAC advice for their own good 12.7% said they would follow pre anaesthesia advice only till surgery, 7% said that they would do so only if the surgeon advises same while 8.7% were not sure.

Questions	Response	Number	Percentage
Why have you come to anaesthesia clinic?	To comply with surgeon's instructions	97	32.3
	To get date for surgery	76	25.4
	For pre anaesthesia assessment	90	30.1
	I don't know	37	12.4
What is done in a pre-anaesthesia clinic?	General assessment of patient done before anaesthesia	75	25.1
	Some test to be performed to assess anaesthesia fitness	93	30.8
	Assessment and optimization before surgery	55	18.4
	I don't know	77	25.8
Who can perform the pre anaesthetic check-up?	Nurse in PAC clinic	20	6.6
	Technician sitting in PAC clinic	23	7.7
	Anaesthesiologist in PAC clinic	222	74.2
	Don't know	35	11.7

What is the importance of Pre-anaesthesia check-up before surgery?	Reduces the risk of anaesthesia and surgery	135	45.2
	Required to get date for surgery	94	31.3
	Legal documentation	7	2.3
	Don't know	64	21.4
Are conditions like heart disease, breathing difficulties, renal problems have to be expressed before surgery?	Yes	215	71.9
	No	6	2
	Not if well controlled	24	8
	Don't know	55	18.4
If there is a pre- existing medical condition does it needs to be optimized before surgery?	Yes	203	67.6
	No	14	4.6
	Not required if not related to surgical condition	27	9
	Don't know	60	20.0
Are above mention conditions affect outcome of anaesthesia and surgery?	Yes	162	54.2
	No	11	3.6
	Don't know	127	42.3
Does habits like drinking and smoking affect outcome of anaesthesia and surgery?	Yes	231	77.3
	No	9	3
	Don't know	59	19.7
Is pre-anaesthesia check-up required only when surgery is to be performed under anaesthesia?	Yes	106	35.5
	No	51	17.1
	Don't know	142	47.5
When should you discuss your fears/queries regarding anaesthesia (if any)?	In ward with surgeon	163	54.5
	In pre-anaesthesia clinic	83	27.8
	In operation theatre	31	10.4
	Don't know	22	7.4
Do you follow any advice you will get in a pre-anaesthetic clinic?	Yes, it is for my own good	214	71.6
	Yes, till surgery is performed	38	12.7
	Only if surgeon says so	21	7
	Don't know	26	8.7

**Table 4. Patient's responses to Questionnaire**

#### Correlation between Patient's Education Status and Knowledge

On applying One-way ANOVA, a statistically significant association was seen between literacy status and knowledge about PAC. Knowledge about pre anaesthesia clinic was found to be highest among graduates.

Literacy Status	Mean $\pm$ S.D.	F statistic	Confidence Interval for Mean		P value
			Lower Limit	Upper Limit	
Illiterate	5.28 $\pm$ 2.21	4.175	4.8	5.75	0.006
Primary School	5.74 $\pm$ 2.26		5.27	6.22	
Secondary School	6.06 $\pm$ 2.0		5.68	6.45	
Graduates	7.06 $\pm$ 1.48		6.27	7.85	

**Table 5. Correlation between Patient's Education Status and Knowledge**

#### DISCUSSION

Pre-anaesthesia assessment is a very important aspect of patient care. It includes detailed history taking, physical examination and investigations. The main objective of pre - anaesthetic check-up is to optimize patients before surgery, so as to reduce the risk of anaesthesia and surgery as far as possible and improve outcome. Besides, patients also get opportunity to discuss any queries regarding anaesthesia.<sup>5</sup> Task of anaesthesiologist becomes more difficult if patients try to fruitlessly rush through it. This may result in patient being inadequately optimized before surgery. It is a well-established fact that both the patient's preoperative physical status and surgical procedure affects morbidity and mortality during surgery. Kluger et al. examined the Australian Incident Monitoring Study database found that inadequate preanaesthetic management resulted in six-fold increase in mortality.<sup>6</sup>

Significant number of patients come to PAC clinic either to get the date for surgery, or to comply with surgeon's instructions and are not aware about purpose of their visit

to PAC clinic. Almost half of the patients do not understand the importance of pre anaesthesia check-ups, although nearly two third of total patients in our study knew that their pre anaesthetic check-ups will be done by anaesthesiologist (approx. 70%) and agreed that they should inform about their medical conditions and addictions to anaesthesiologist, but 32% did not believe that their condition need to be optimised before surgery. This finding is in contrast to other study<sup>7</sup> where it was found that patients in general have poor perception of anaesthesia and anaesthesiologist. Second visit for nearly half of the patients could be the reason for these contrary findings. Surgeons should also emphasize the purpose of PAC as patient first comes to them and from there is referred to anaesthesiologists. If patients understand the purpose of PAC and cooperate fully during preoperative optimization, unnecessary delays and cancellations on the day of surgery could be avoided.

Patients usually have certain fears or questions, these include fear of pain or awareness during surgery. Chew et al<sup>1</sup> showed that patients were more afraid of postoperative

pain, and their main fear was that they may not be able to come out of anaesthesia. In this study, out of 300 patients 54.5% believe that their fear should be discussed with the surgeons in ward. This is understandable as patients are primarily in contact with the surgeons and are being referred to PAC by them without informing the patients regarding real purpose of PAC. Pre anaesthesia clinic is the place where patient first time comes in contact with anaesthesiologists and good communication link should be established with the patient at that time so that their fear & queries regarding anaesthesia can be answered satisfactorily.<sup>8</sup>

Although 71.6% patients in this study say that they follow the advice given in PAC clinic, but as many of them are admitted in hospital, need to follow the advice given in PAC should also be emphasized by surgical team as patients are not aware about the necessity to continue treatment perioperatively and after surgery.

Baaj et al and Singla & Mangla studied impact of education on the knowledge of anesthesia.<sup>9,5</sup> They showed that knowledge of anaesthesia was directly related to educational status. We in our study also found that patients who had completed their graduation were significantly more knowledgeable than illiterate patients. However in the study by Shevde et al no relation between anaesthesia knowledge and education level or occupation was found.<sup>10</sup>

This study however had many limitations. First, small sample size is the main limitation of the study and patients included in this study belonged to poor socioeconomic status and were not highly educated. Secondly, patient should also be educated during their first visit to pre anaesthesia clinic regarding role of anaesthesiologist in perioperative care and re assessment should be done for such patients after surgery. Thirdly, not only patients who are posted for surgery, even surgeons and other paramedical staff also consider pre anaesthetic assessment and optimisation as wastage of time and money therefore emphasizing the need for assessment of knowledge and education regarding PAC in other medical and paramedical staff as well.

## CONCLUSION

Patients do not have adequate knowledge about many aspects of pre-anaesthesia assessment and its role in improving the outcome of surgery. Hence, efforts should be made by anaesthesiologists to improve communication with

patients and to educate and emphasize the importance of PAC clinic.

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