Effectiveness of Preoperative Anaesthesia Assessment in a Multispecialty Hospital in Sub-Saharan Africa.

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Abstract

Anaesthetists routinely visit patients before surgery for preoperative assessment. As this is often the first contact between the anaesthetist and the patient, the impact of this visit on subsequent patient cooperation may be significant. This study determine the effectiveness of preoperative anaesthetic assessment.

This study was a prospective, descriptive cross-sectional study of 184 ASA I and II consenting adult patients scheduled for surgical operations at the University of Ilorin Teaching Hospital. A questionnaire was administered to the patients on the day before surgery. The questions assessed the amount of information the patients had about the anaesthetist that conducted the pre-anaesthesia review, the conduct of anaesthesia and the extent of patient participation when determining the anaesthetic plan.

The mean age of the participants was 43.52 ±14.30.When asked to identify the anaesthetist that visited them, 128 (69.57%) patients could not remember the name of the anaesthetist while 138 (75%) did not know the cadre of anaesthetist that visited them. This study found that pre-anaesthesia assessment was not effectively conducted. The same level of attention and care demonstrated in intraoperative care should be employed during its conduct.

Key words: Anaesthesia assessment, Anaesthesia review, Preoperative assessment

Introduction

Anaesthetists routinely visit patients before surgery for preoperative assessment. The pre-anaesthetic review is an opportunity for the anaesthetist to establish a rapport with the patient, provide information about the process of anaesthesia and its associated risks and reduce or allay any anxiety and fears the patient may have about the upcoming operation and anaesthetic experience. It also enables the anaesthetist to identify any pre-existing medical disorders, assess their level of severity and implications for anaesthesia and initiate therapy to optimize the patients' preoperative status.

As this is often the first contact between the anaesthetist and the patient, the impact of this visit on subsequent patient cooperation may be significant. A previous study has shown that there is a strong correlation between the quality of pre-anaesthetic visit and the assessment of quality of anaesthesia services.[1] Despite this, many patients were often not adequately involved in the anaesthetic plan during pre-anasthesia assessment. In a study by Gebremedhn and Nagaratnam[2] it was found that anaesthetists introduced themselves to only 24% of the patients and provided information about anaesthesia to 32% of the patients. Effective pre-anaesthesia review is important as it has been found that inadequate preoperative anaesthesia review contributed to death, morbidity and ICU admission and case cancellation.[3]

Preoperative anaesthesia clinics have been found to be effective in improving pre-anaesthesia assessment and reducing cancellations on the day of surgery.[4]Other methods found useful in improving pre-anaesthesia assessment are the provision of written information on anaesthesia to patients in the preoperative period[5] and the use of a standardized anaesthesia form for patient review.[6]

In many parts of Nigeria, the pre-anaesthetic visit consists mainly of a verbal interview, physical examination, review of investigation results and request for additional investigations where necessary.[7]There is minimal use of printed information or audiovisual aids in providing anaesthesia information to patients. The aim of our study is to evaluate the conduct and determine the effectiveness of preoperative anaesthetic assessment among surgical patients.

Materials And Methods

This study was a prospective, descriptive cross-sectional study of 184 ASA I and II consenting adult patients scheduled for surgical operations at the University of Ilorin Teaching Hospital.Ethical approval was obtained from the Institution's Ethics Review Board.

The University of Ilorin Teaching Hospital is a tertiary public health facility that receives referrals from Kwara State and neighbouring states of Kogi, Niger, Ekiti and Oyo. It is a multispecialty hospital with

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fourteen operating suites.

Sample size was determined with the use of Fisher's using a target estimation estimate of 14.3%.[8]The average annual elective surgical procedures was 1460, hence the study sample size was calculated to be 184.

All consecutive adult patients (aged 18yrs and above) who had elective surgical procedures and met the inclusion criteria were recruited for the study. Patients with age less than 18years, communication difficulties from language barrier and psychiatric illness and those who refused to consent were excluded.

Data collection

After routine pre-operative assessment was performed on the patient by an anesthetist who was not involved in the conduct of the study, a questionnaire consisting of twenty-twovariables in two sections was administered to each patient.The questionnaire was administered on the day before surgeryby a trained registrar in the department of Anaesthesia. The first section consisted of six questions on the patients' demographic data and type of surgery. The second section consisted of sixteen closed ended questions to assess the amount of information the patient had about the anaesthetist that conducted the pre-anaesthesia review, the amount of information given to the patients about the conduct ofanaesthesia and the extent of participation the patient was permitted to have in determining the anaesthetic plan.

The questionnaires were verbally administered in person by the patients' bedside on the morning of surgery. The patients had the option of not answering any question they were not comfortable with and they were permitted to withdraw from the interview at any time if they so wished.

Data Analysis

Results generated from this study were expressed as frequencies or proportions of total, means and standard deviations. Tests of significance were analyzed with student t test for means of continuous variables and chi-square test for categorical variables using the computer software package SPSS version 16.0. A p-value of less than 0.05 was considered statistically significant.

Results

One hundred and eighty-four patients participated in the study. The mean age of the participants was 43.52 ±14.30. There were 94 (51.09%) females and 90 (48.91%) males. Mean age of females was 43.12 ±13.79, range 18-78years while that of males was 43.90 ±14.89, range 18-70years.

When asked to identify the anaesthetist that visited them, 128 (69.57%) patients could not remember the name of the anaesthetist while 138 (75%) did not know the grade of anaesthetist that visited them.

Only 92 (50%) of respondents were permitted to ask questions, 108 (58.7%) said sufficient time was available for the review however126 (68.5%) were not

Table I: Quality of Preanaesthesia review

	Yes (%)	No (%)	Irrelevant (%)
Permission to ask questions	92 (50)	92 (50)	0
Sufficient time for review	108 (58.7)	74 (40.2)	2 (1.1)
Understandable explanations	118 (64.1)	64 (34.8)	2 (1.1)
Opportunity to chose	56 (30.4)	126 (68.5)	2 (1.1)
Permit anaesthetist to influence choice	134 (72.8)	34 (18.5)	16

Table II: Patient satisfaction after review

	Fully satisfied	Mildly satisfied	Moderately satisfied	Not satisfied	$\chi 2$	p-value
Permission to ask questions	72 (78.3)	0 (0)	20 (21.7)	0 (0)	57.324	0.000
Sufficient time for review	72 (66.7)	4 (3.7)	32 (29.6)	0 (0)	48.834	0.000
Understandable explanations	76 (64.4)	4 (3.4)	38 (32.2)	0 (0)	55.161	0.000
Opportunity tochoose	42 (75.0)	0 (0)	14 (25.0)	0(0)	23.906	0.001
Permit anaesthetist to influence choice	56 (41.8)	26 (19.4)	48 (35.8)	4 (3.0)	15.124	0.235

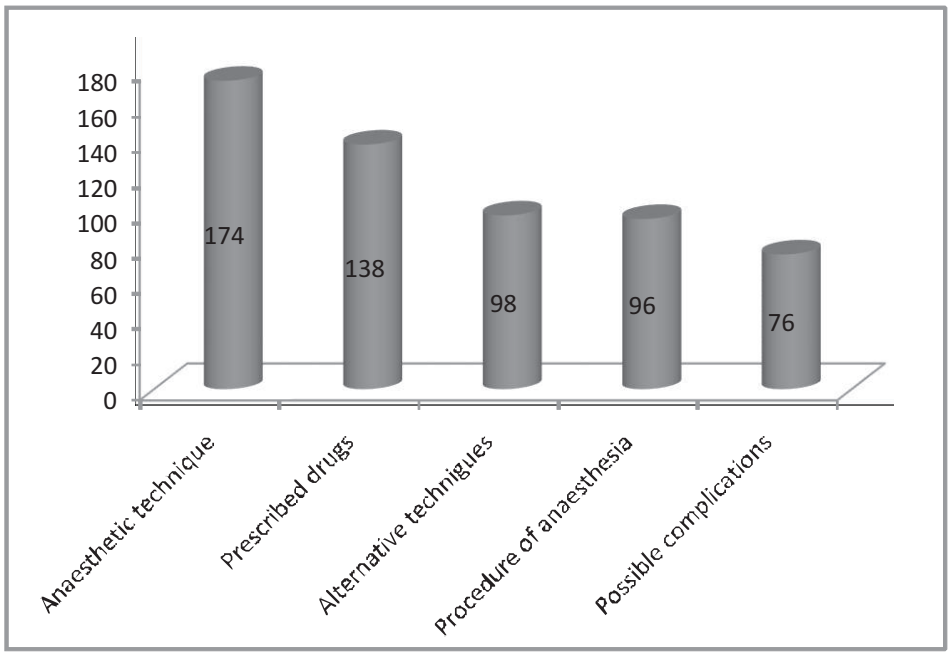


Fig 1: Information received from the anaesthetist

permitted to choose the anaesthetic technique. If allowed to make a choice of technique, 134 (72.8%) reported that they would permit the anaesthetist to influence their choice (Table I).

Seventy-six (41.3%) patients were fully satisfied with the preanaesthesia assessment, 62 (33.7%) were moderately satisfied, 5 (2.7%) mildly satisfied while 8 (4.4%) were not satisfied. The factors that resulted in statistically significant increases in patient satisfaction levels were sufficient time for pre-anaesthesia review, opportunity to ask questions, patients' choice of anaesthetic technique and the provision of easily understandable explanations by the anaesthetist (table II). The respondents who were comfortable allowing the anaesthetist to choose the anaesthetic technique did not have improved satisfaction scores.

When patients were able to remember the name and grade of the anaesthetist that conducted the preanaesthesia assessment, they reported higher levels of satisfaction(χ^2 34.365, p 0.00001). This was also true of those who remembered the grade of the anaesthetist(χ^2 23.475, p 0.000032) (Table IV).

Of the five classes of information that should be provided to the patients, information on possible complications was the least providedto 76(41.3%) respondents while information on anaesthesia technique was the most provided to 174(94.6%) respondents (Fig 1).

Discussion

Our study found that 69.57% of the respondents could not remember the name and 75% could not recall the grade of the anaesthetist that did the preoperative assessment. We infer from this that the pre-anaesthesia review was not effectively conducted. The ability to recall important parts of the pre-anaesthetic assessment suggests that the patient paid attention during the review and that the anaesthetist was able to establish a rapport with the patient.The anaesthetist may not have adequately introduced themselves to the patient or the patient may not have been attentive.

Several factors have been shown in studies to affect the recall of medical information. The provision of large amounts of information has been found to hinder effective recall while keeping the information short and simple improves recall.[9]When the review is rushed, as many of the respondents reported, large amounts of information are provided to the patient in a short period possibly making it more difficult for the patient to recall these information. Similarly, advancing age[10]and heightened emotional states like anxiety[11] are inversely related to recall.

However, information that is perceived as important or relevant to the patient is usually recalled more effectively.[12,13] Also, information that is presented in written format or with the use of pictogr'aphshas higher recall rates[14,15]. The information in our study was verbal; there was no use of written or pictorial information. Another study found that female gender is associated with better recall.[16]This finding was not replicated in our study.

Healthcare should be respectful of and responsive to individual patient preferences, needs and values and ensure that patient values guide all clinical decisions. To accomplish this in anaesthesia, the

preoperative patient interview is important to establish the patient's preferences and needs; it also increases efficiency in managing operating theatre time. The importance ascribed to the interview part of the preoperative assessment has become greater as it has been shown that many routine preoperative investigations are not necessary if adequate history and physical examination are done.[17]The preoperative tests may increase cost without sufficiently altering the management plan.

The preoperative interview is an opportunity for the patient to get introduced to the anaesthetist that would be responsible for his intraoperative management. As such, the anaesthetist conducting the interview should introduce himself stating his name and status. Patients usually prefer to be interviewed by the anaesthetist that would be responsible for their intraoperative management. If the interview is conducted by a trainee, the patient may want to be assured that his or her level of competence and experience are appropriate, and that a senior anaesthetist would be available in the theatre should they be needed. These needs of patients may not have been adequately met in this study since the identity of the anaesthetist was not satisfactorily communicated to the patient. Insufficient physician communication skills can lead to extensive negative effects on the trust of patients in their physicianand increased likelihood of litigation.[18]

Generally, people are willing to play a more active role in the decision making process of their own health. Consequently, it is important to provide adequate information to the patient about the process of anaesthesia and allow the patients to make an informed choice of anaesthetic technique. While 94.57% (Fig 1) of the respondents were told the anaesthetic technique that would be employed, only 53.26% (Fig 1) of them were told about alternative anaesthetic techniques and 30.4% (Table I) were allowed to choose their anaesthetic technique. Therefore, patients were not given sufficient opportunity to participate in the decision making process.

Information provision to patients was generally poor. Information on alternative anaesthesia techniques and the process of anaesthesia were provided to 53% and 52% of patients respectively. Gebremedhnet al[2] found that anaesthetists provided information about anaesthesia to only 32% of patients and information on possible complications to 21%. In our study, anaesthetists did not provide information on possible anaesthetic complications to patients as only 41.3% of patients were provided this information. Withholding information on anaesthetic complications should be discouraged as it has been found that it does not increase patients' anxiety but has the advantage of allowing patients make a fully informed choice before consenting for surgery.[19]

Sufficient time needs to be allocated to the pre-anaesthesia review as 40.2% felt the review was rushed, only 50% of respondents were permitted to ask questions and 68.5% reported that the explanations of the anaesthetist were not understandable. Considering the importance of pre-anaesthesia review to the successful outcome of anaesthesia, the quality of review needs to be improved upon.Insufficient physician communication skills can lead to extensive negative effects on the trust of patients in their physician and increased likelihood of litigation. Perhaps more training on communication skills would bridge this divide.

Despite the fact that all the patients were reviewed before anaesthesia, only 41% reported that they were fully satisfied with the review. Our study showed that the issues important to patients' satisfaction are the provision of sufficient time for review, allowing patients to ask questions and allowing patients to choose their anaesthetic technique.

We therefore recommend that pre-anaesthesia review be improved by allocating sufficient time to the review, allowing patients to ask questions and chose anaesthetic technique. The emphasis should shift from doing a review to doing a high quality review. Perhaps use of video assisted methods in the conduct of pre-anaesthesia assessment or the establishment of pre-anaesthesia clinics could improve the quality of assessment.

Conclusion

Pre-anaesthetic assessment is ineffective when the same level of attention and care demonstrated in intraoperative care is not deployed during its conduct. The same sense of innovation that drives intraoperative care needs to drive pre-operative care. Anaesthesia care providers need to bring the same high standards they apply during intraoperative care into the preoperative setting.

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