Southern African Journal of Anaesthesia and Analgesia 2016; 22(2):60–64
http://dx.doi.org/10.1080/22201181.2016.1157963

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South Afr J Anaesth Analg
ISSN 2220-1181 EISSN 2220-1173
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RESEARCH

The informed consent process for anaesthesia: perspectives of elective surgical patients at Inkosi Albert Luthuli Central Hospital, Durban, South Africa

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Background: Amongst state hospitals in the eThekwini municipality, obtaining informed consent for anaesthesia is often an informal interaction between the patient and anaesthetist, lacking structure and standardisation.
Objectives: To evaluate the informed consent process from the patients' perspective in an attempt to modify current practice.
Methods: Competent adult patients presenting for elective surgery were presented pre- and postoperatively with structured questionnaires addressing various aspects of the consent process.
Results: Of 143 included patients, only 57% of patients were given information about their anaesthetic preoperatively. With regard to complications experienced during anaesthesia, 36% of patients preferred not to be informed of any possible sequelae, while 17% wanted to be informed of all possible complications. In total, 83% of patients who had signed the surgical consent form with the surgeon thought that they had signed an anaesthetic form with the anaesthetist. Some 56% of patients felt that written consent on a specific standardised anaesthetic consent form should be introduced.
Conclusion: Even though the majority of patients are being seen preoperatively by the anaesthetist, the quality of this assessment is concerning, in terms of the amount and depth of information imparted and the lack of standardisation of information given.

Keywords: anaesthetic risk, bioethics, complications and anaesthesia, informed consent, patient and anaesthesia

Introduction

Informed consent, one of the defining elements of contemporary bioethics, is meant to protect patients, ensuring that their rights are not violated, and that they are treated effectively and fairly.[1] Amongst the state hospitals in the eThekwini municipality, the current practice of consent in anaesthesia is often an informal interaction between the patient and anaesthetist.[2] In many instances a single consent is obtained by the surgeon, giving the patient the false impression that anaesthesia and surgery are indistinguishable.

Several studies focusing on patient knowledge and perceptions regarding anaesthesia have emphasised the qualifications and role of the anaesthetist in patient care.[3–9] These studies have only considered the issue of patient perceptions of informed consent to a small degree.

This study aimed to ascertain the knowledge of patients with regard to the information divulged by the anaesthetist during the preoperative interview, focusing specifically on the extent and depth of information imparted. It further assessed the attitudes of patients with regard to the existing method of obtaining consent, the role of the anaesthetist in patient care, and ways in which the current process of obtaining informed consent can be modified.

Methodology

The study was conducted at the Inkosi Albert Luthuli Central Hospital (IALCH), a central state hospital located in Durban, KwaZulu Natal (KZN). The study population consisted of competent, adult patients > 18 years old and of American Society of Anaesthesiologists (ASA) Physical Status Classification I–III presenting for elective surgery over a two week period (September 5–16, 2011).[10] Patients expected to be admitted to an intensive care unit (ICU) or high care unit postoperatively were not included in the study. A preoperative questionnaire was administered by interviewers to patients after they had been assessed by an anaesthetist and before being given any premedication. Patients were then interviewed by the same interviewers postoperatively (within the first 6–12 hours) when a second questionnaire was administered. The interviewers were trained in how to assess whether patients were orientated to person, place and time before commencing the preoperative and postoperative interviews. In addition, with the assistance of the nursing staff monitoring the patients in the ward, the interviewers determined the most suitable time to assess if the patient was fully orientated postoperatively and, if so, proceeded with the questionnaire. All patients consented to the study and complete confidentiality was maintained. To limit bias, patients were seen by the same interviewer pre- and postoperatively. Only patients who were interviewed both pre- and postoperatively were included in the study.

Questionnaires canvassed the knowledge and attitudes of patients. Both open- and closed-ended questions pertaining to the following aspects were evaluated:

Preoperative questionnaire:

- demographic data;
- aspects of the pre-anaesthetic interview including information imparted by the anaesthetist, documentation of the consent, the opportunity for patients to ask questions, patient coercion and concerns/fears experienced by the patient;
- knowledge regarding the anaesthetist and their role

Postoperative questionnaire:

- details of anaesthesia including mode of anaesthesia and complications experienced;

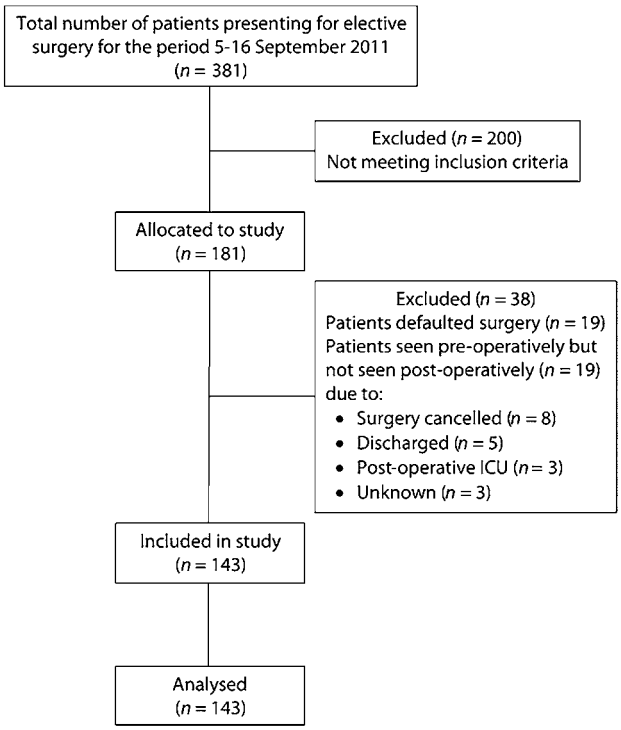


Figure 1: Consort diagram

Table 1: Summary of the demographic data for the study population.

Demographic data	Respondents (%)
Age (years)	
18–30	21
31–50	37
51–65	27
> 65	14
Gender	
Male	43
Female	57
Race	
Black	58
White	93
Indian	21
Coloured	
Occupation	
Homemaker	38
Student	20
Pensioner	42
Unemployed	27
Employed	
Level of education	
Primary school	15
Secondary school	39
Matric	29
Tertiary education	10
No formal education	52
No response	

- information imparted by the anaesthetist specific to risks/complications that could occur during an anaesthetic and the detail to which these complications should be shared with the patient;
- any change in how patients view anaesthetists before and after an anaesthetic;
- patient views on the current process of obtaining informed consent and how this process could be modified.

The questionnaires, prepared in both English and Zulu, were administered by interviewers proficient in both languages. All questionnaires received were analysed. The SPSS version 9.0 (SPSS Inc., Chicago, IL, USA) package was used. Descriptive and inferential statistical analyses were performed. The study was approved by the Biomedical Research Ethics Committee (Reference BF084/09) at the Nelson R Mandela School of Medicine.

Results

A total of 143 patients were included in the study (Figure 1).

Preoperative questionnaire

The demographics of the study population are shown in Table 1.

In all, 139 (97%) respondents indicated that they had been seen by an anaesthetist preoperatively, of whom 85% claimed to have signed a consent form with the anaesthetist. Four patients, although having been documented as seen by the anaesthetist, were not aware of this. Only 55% (n = 79) of patients were given information regarding their anaesthetic by the anaesthetist who saw them preoperatively. Information categories included type of anaesthetic (n = 58), analgesia (n = 19), allergies (n = 8), insertion of intravenous line (n = 5), preoperative fasting (n = 3) and premedication (n = 2). Some patients received information in more than one category.

During the preoperative interview 60% of patients asked questions and 97% were satisfied with the explanations given. Four patients felt coerced into choosing a specific mode of anaesthesia.

Some 95% of patients were aware that an anaesthetist was a doctor, as opposed to a medical technician or nurse. Despite 42% of patients indicating that knowledge of their anaesthetist's level of experience was relevant to them, the majority of patients preferred not to choose their anaesthetist (96%) or surgeon (84%). Reasons cited included an overall unfamiliarity with specific doctors and their specialities, and a belief that all doctors are essentially competent.

Postoperative questionnaire

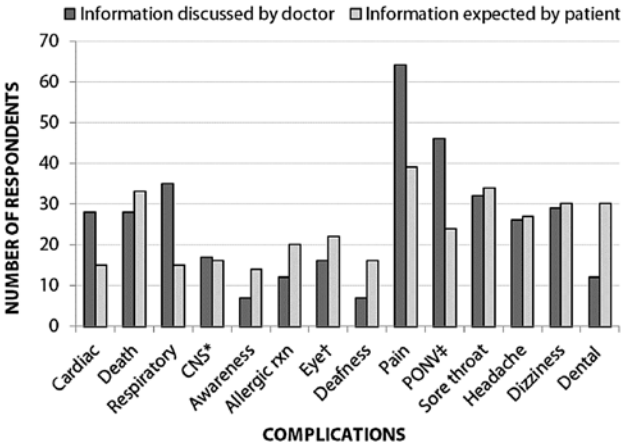
In total 94% of patients were verifiably correct concerning the type of anaesthesia administered to them. Of the 126 patients who indicated that they did not experience any complications, 10 patients actually had. These consisted of three cases of failed regional anaesthesia and subsequent conversion to a general anaesthetic (including one case of a dural puncture during combined spinal-epidural), three cases of postoperative pain, three cases of vomiting and/or hypotension and one case of respiratory problems requiring nebulisation in the recovery room. Patients were presented with various complications

known to occur during an anaesthetic (either general anaesthesia, GA, or regional anaesthesia, RA). Patients were asked to indicate whether these complications had been shared with them preoperatively. They were then asked which of these complications they would have expected to be informed about. The results are illustrated in Figures 2 and 3.

There was a statistically significant correlation (p = 0.003) between the highest level of education achieved by patients and their desire to know all the complications associated with their anaesthesia. Figure 4 summarises the proportion of patients who wanted to be informed of the different categories of complications in anaesthesia.

There were no significant correlations between education level and the other categories of complications.

One hundred and thirteen (79%) patients did not wish to be given any more information during the preoperative interview than what had already been discussed with them. One hundred and thirty eight (97%) patients were satisfied with the pre-anaesthetic interview. The decision to continue with surgery and anaesthesia for 92% of patients was not dependent on the amount and depth of information that was imparted to them in the preoperative interview. After the postoperative interview, 43% of patients (compared with 4% of patients preoperatively) now indicated that, should they require another anaesthetic in the future, they would opt to choose an anaesthetist of their preference. Some 50% of patients deemed the current process of verbal consent to be adequate, while 56% felt that written consent on a specific standardised anaesthetic consent form should be used. Only 15% indicated that verbal consent together with an information pamphlet or video would be adequate.



*CNS (central nervous system): refers to problems with concentration and memory. †Eye: includes blurred vision and temporary or permanent blindness. ‡PONV: refers to postoperative nausea and vomiting.

Figure 2: Complications that occur during a general anaesthetic.

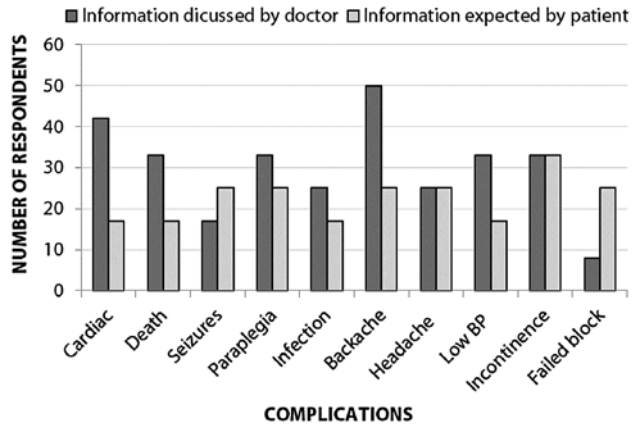


Figure 3: Complications that occur during a regional anaesthetic.

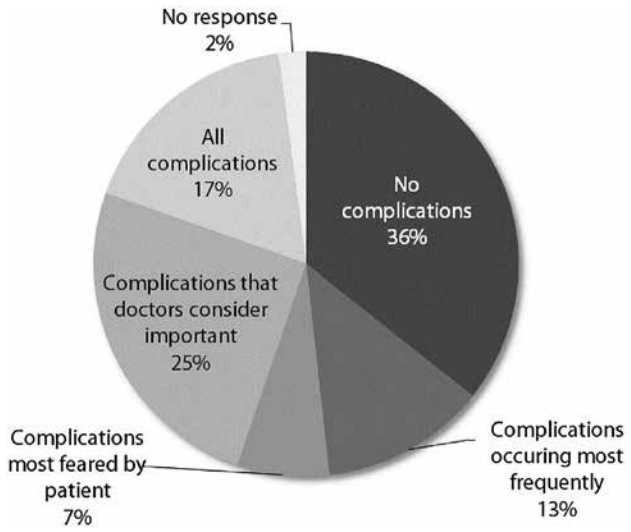


Figure 4: Complication disclosure: proportion of patients wishing to have the different categories of anaesthetic complications discussed with them.

Discussion

Anaesthesia has traditionally been a discipline that stands on the periphery of the rest of the surgical world. Therefore, emphasising the role of anaesthesiology to the general public is a challenging prospect. Studies have shown poor knowledge, lack of perception and overall ignorance of anaesthesia as a discipline amongst patients, especially those who are less educated.[3–9]

The high (50%) proportion of our patients whose highest level of education was primary school may reflect a population with inadequate/inappropriate knowledge of anaesthesia. This suggests that the level of awareness and understanding of anaesthesia amongst our study population is limited.

Patients utilising the public health system often play a passive role in their management by accepting a paternalistic form of healthcare. In stark contrast, patients receiving healthcare at private facilities are perceived to be more aware of their rights. They therefore seek healthcare with a sense of entitlement pertaining to the nature of the healthcare and the choice of a healthcare provider.

However, when informed of the risks associated with anaesthesia, there was a high proportion (43%) of our study population who changed their minds, wanting to take a more proactive role in their management. Possible reasons for this could be the more detailed information regarding anaesthesia given to the patients during the postoperative interview, in particular the complications, and the actual experience that the patients had in theatre, making them more aware of anaesthesia as a whole. This may also represent a shift in patient attitude from a traditional acceptance of paternalism to the expectation of a more inclusive decision-making process. The easy flow of information in our current technological era has given rise to a more informed patient. This necessitates a similar paradigm shift amongst anaesthetists towards a more inclusive informed consent process.

A review done by Klafta *et al.* showed that 78–89% of patients in Britain, Australia and USA were aware that anaesthetists were medical doctors.[11] This is in contrast to the developing world where 38–57%of patients were knowledgeable in this regard.[4, 9]

The vast majority (95%) of our patients were aware that an anaesthetist is a medical doctor. This may be falsely reassuring, as studies have shown that while patients may identify an anaesthetist as a medical doctor, most are unaware of the special skills and pivotal role of the anaesthetist in perioperative care.[3–9]

There is currently no specific anaesthetic consent form used within the state hospitals in KZN. Among patients who had signed the surgical consent form with the surgeon, 83% thought that they had signed an anaesthetic form with the anaesthetist, indicating a general misconception that anaesthesia and surgery are indistinguishable.[12] Once patients were made aware of this, 56% felt that a standard consent form should be used by anaesthetists as well.

It is evident that anaesthetists are not adequately informing patients of complications that may occur intraoperatively or postoperatively in the recovery room. This highlights two major issues. First, most of our patients who developed complications gave 'informed' consent for anaesthesia without the knowledge that this complication could arise. Second, there is a lack of communication between patient and anaesthetist. When a patient experiences an anaesthetic-related complication in the recovery room, it is the duty of the anaesthetist to ensure that the patient is made aware of and fully understands the complication. This may need to take place at a later stage if the patient is not fully conscious and orientated in the recovery room. Overall, this may be reflective of a substandard level of communication between anaesthetist and patient.

With regard to the amount of information that should be disclosed to a patient, the Association of Anaesthetists of Great Britain and Ireland (AAGBI) advocates that patients should be informed of all material risks.[13] A material risk is one that a reasonable person in the patient's position would regard as significant. Universally, this is thought to be an incidence of 1%. Anaesthetic complications can be classified as major or minor (Table 2).[14] The percentages cited for the various complications will vary depending on the type of surgery being performed as well as the specific patient profile. If informing a patient about complications that carried a risk of 1% or more was considered to be a bare minimum requirement for informed consent, the results from our study population are very concerning (Table 3).

The authors, however, acknowledge that a number of other variables, for example a patient's level of understanding, the type of surgery, and the knowledge and skills of the anaesthetist, may skew the results obtained for this kind of survey.

Regarding perioperative complications, there were discrepancies between the information imparted by the doctor and information expected by the patient; for example, cardiorespiratory complications during general anaesthesia and the complication of a failed block during regional anaesthesia. In a study of obstetric patients, Patee et al. found that patients wanted to be informed of all complications associated with epidural analgesia including the low-risk ones.[15] A study conducted in Perth showed that most patients wanted to be informed about the risks of postoperative nausea and vomiting (PONV) and postoperative pain.[7] Matthey *et al.* showed that some of the most concerning perioperative complications for patients in Canada were awareness (40%), CNS complications (19%) and death (12%), whereas our study population were most concerned about post-operative pain (39%), sore throat (34%) and death (33%).[16]

This may reflect that in different locales patients' perceptions differ.

It was evident in our study that the education level of patients affected the amount of information that they preferred. This is in keeping with studies conducted in other parts of the world.[4,5,9]

Four respondents asserted that they were coerced by the anaesthetist into deciding on their mode of anaesthesia. Such

Table 2: Risk of complications during anaesthesia.

Major morbidity	Risk (%)	Minor morbidity	Risk (%)
General anaesthesia			
Cardiac arrest	0.005–0.01	Postoperative pain*	10–50
Respiratory complications*	0.02–2	PONV*	25
CNS problems*	14–50	Sore throat*	10–50
Awareness	0.03–0.3	Headache*	20
Anaphylaxis	0.01	Drowsiness*, Dizziness*	20–50
Ocular complications	0.0008–1	Dental damage*	1
Deafness	0.01		
Regional anaesthesia			
Cardiac arrest	0.01	Backache*	20–50
Seizures	0.013	Headache*	1–10
Paraplegia	0.003	Failed block*	5–25
Infection	0.007–0.5		
Neurological injury	0.02		
Haematoma	0.0007		

Notes: *For convenience, those complications that occur in an incidence of 1% or more have been marked with an asterisk.

Table 3: Patients who were informed of complications that carry a risk of 1% or more.

General anaesthesia	Respondents (%)	Regional anaesthesia	Respondents (%)
Respiratory complications	34.6	Backache	50
CNS complications	16.9	Headache	25
Postoperative pain	63.8	Failed block	8.3
Postoperative nausea and vomiting	46.2		
Sore throat	32.1		
Headache	26.2		
Drowsiness, dizziness	29.2		
Dental damage	12.3		

perceptions of coercion are unsatisfactory and emphasise the need for a shift to inclusive decision making.

Limitations

Information imparted varies according to the doctor concerned, the type of surgery and the expectations of the patient. These confounding variables have not been accounted for in this study. A patient's previous anaesthetic history (which was not explored in this study) may influence the manner in which the questionnaire is answered. Such patient bias has not been considered. It is plausible that our short sampling period and sample size, based on previous studies, may affect the external validity of the study.[15,17] ICU and high-care patients were excluded from this study. Such patients are likely to have complications intraoperatively and postoperatively and could be the focus of future studies.

Conclusion

Informed consent in anaesthesia is an absolute necessity and its effect is twofold. First, it allows doctors and patients the opportunity to discuss, evaluate and finally agree on the best possible management that will ensure an optimal outcome for the patient. Second, it increases a much needed exposure to and awareness of anaesthesia amongst our patient population. Even though the majority of our patients are being seen preoperatively by the anaesthetist, the quality of this assessment is concerning, in terms of the amount and depth of information imparted to our patients, the lack of standardisation of information given and a general failure of our anaesthetists to inform patients of material risks. It is the opinion of the majority of our patients (and anaesthetists surveyed) that the current process of informed consent in anaesthesia could be improved by the introduction of written consent on a standardised anaesthesia-specific consent form.

Acknowledgements – The authors wish to thank all respondents who participated in the study, nursing staff at IALCH, fieldworkers and the Discipline of Anaesthesiology and Critical Care, UKZN.

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Received: 19-10-2015 Accepted: 22-02-2016