

SAUDI PATIENTS' KNOWLEDGE AND
ATTITUDE TOWARD ANESTHESIA
AND ANESTHESIOLOGISTS

- A Prospective Cross-Sectional Interview Questionnaire -

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Abstract

Background: Patients' awareness of the duties of anesthesiologists in the operating theatres may sometimes be limited. Many studies around the world proved lack of patient perception of the anesthesiologist's role in surgical practice.

Methods: One hundred and seventy operative patients were interviewed by anesthesiologists in the peri-operative period in King Khalid University Hospital at Riyadh KSA. This paper reports the results of a prospective study on these patients' interviews by filling predetermined questionnaire by the interviewer. The survey was conducted on two sessions namely before anesthesia and surgery, and in the first post operative day. It included three sections exploring the demographical profile of the participant, knowledge about anesthesia procedure, assessment, anesthesiologists personnel, postoperative pain

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relief and the attitude toward the service given to him.

Results: Patients who recognized the anesthesiologists as specialized doctor consisted of 55.3%. But those who recognized anesthesia services during surgical intervention were only 16.5%. This result reflect ignorance of the public of the function of anesthesiologists, showed lack of perception regarding anesthesia procedures during surgery, and the role of the anesthesiologist in monitoring resuscitation and postoperative analgesia. Patients showed inclination to know more about the anesthesia services and choices and ranked the services from very good to excellent. The illiterate section of the studied population showed statistically significant correlation between their information on anesthesiologists and anesthesia, and their degree of education, level of income and habitat.

Conclusions: Reasonable percentage of the patients knew that the anesthesiologist is a doctor who administers anesthesia. Services of anesthesiologists were highly appreciated, but their function during the operation and nature of anesthetics administered were poorly known. These results call for the necessity to educate the surgical patient by the anesthesiologists preoperative interview allow more time to establish rapport, by distributing educational material related to anesthesia and use of the media to educate illiterate section of the public on subjects pertaining to anesthesia.

Key words: Anesthesia, patient's knowledge, attitude, anesthesiologist patient relations, patient education.

Introduction

There had been rapid developments in the social and cultural aspects in Saudi Arabia, and anesthesia for that matter has evolved rapidly within the last few decades. Although anesthesia evolved more than 150 years ago in the 1840s, the anesthesia practice in Saudi Arabia was introduced by practitioners trained in western or eastern countries.

There is a general feeling that the specialty of anesthesia carries low profile when compared to other medical and surgical specialties¹. In some countries studies of similar kind showed that the public knowledge of

anesthetic practice and attitude toward it, is limited²⁻⁵. British anesthesiologists ranked second and third with regard to prestige and academic qualifications⁶. In a more recent study, only 63% of the British patients knew that anesthesiologists were medical doctors⁷. Other studies addressed the patients' attitude and awareness of the medical and academic qualifications, duties and prestige of Finnish anesthesiologists⁸. Similar studies were conducted in Hong Kong, China, Japan, Germany Canada, USA, Ireland, Australia and Pakistan^{1,5,9-18}.

Patients attitude toward the anesthetic services rendered were investigated before as well after surgery in the postoperative first 24 hours.

The previous experience of surgical treatment was monitored as well to distinguish any effects on the patient's response.

To our knowledge to this date no study of Saudi patient's attitude and knowledge toward anesthesia had been explored.

Patients and Method

Following approval by the Departmental Research Committee at King Khalid University Hospital and patients' verbal consent, a questionnaire was administered to randomly selected surgical patients, using computer generated numbers. These patients were scheduled for elective surgery at the King Khalid University Hospital between June 2004-May 2005.. 6000 general surgical operations were done electively. 170 patients were interviewed. They were all Saudi patient's with mean age 37 ± 13 years, male/female ratio 48.2/51.8. Patients admitted for emergency operations as well as those who were unable to verbally respond to the questionnaire independently, were excluded.

The questionnaire included three sections related to epidemiological data, assessment of patient knowledge of anesthesia, procedure and anesthesiologist activities in the perioperative period, and patient's satisfaction with anesthesia services (Table 1-8).

The patients were interviewed before surgery and the satisfaction part was filled after they had fully recovered from anesthesia and within

24 hours after surgery or before discharge. The data was expressed as frequencies and percent proportions. Statistical analyses consisted of correlations studies using Chi squared test Fisher's exact test, and Spearman's rank correlation when appropriate. The calculation SPSS for windows statistical package was used.

Results

Patients consisted mostly of medium income 52.8% and educated secondary and university levels 60.6%. City residents constituted 88.2% (Table No. 1).

Table No. 1
Demographical profile of the patients

	n	%
SEX		
Male	82	48.2
Female	88	51.8
Nationality		
Saudi	170	100
Religion		
Islam	170	100
Social class		
- High income	20	11.8
- Medium income	90	52.8
- Limited income	14	08.3
- Irregular income	31	18.2
- Student	11	06.5
- Jobless	04	02.4
Level of education		
- University	51	30
graduate	52	30.6
- Secondary school	25	14.7
- Primary school level	09	05.3
- Manage just to write & read	33	19.4
- Illiterate		
Residence location		
- Capital Riyadh	115	67.6
- Major city	35	20.6
- Village	14	08.2
- Lonely house	05	03
- Desert	01	00.6

The health profile of the study sample revealed that the majority were healthy 71.2%, had previous surgery (73.5%) and anesthesia (70.6%) (Table No. 2).

Table No. 2
Health condition of the patients interviewed

	n	%
Health		
- Perfect health 1 st visit to doctor	66	38.8
- Health but visit doctor often	55	32.4
- Some illness frequent visit to doctor	41	24.1
- Much frequent visitor to doctor	08	04.7
Previous Surgery		
- Yes	125	73.5
- No	045	26.5
Previous anesthesia		
- Yes	120	70.6
- No	050	29.4

55.3% of patients recognized that anesthesia is given by a doctor specialized in anesthesia, while 44.7% either stated they did not know or gave a wrong response. The induction of anesthesia intravenously or by inhalation was rightly answered by 57.7% of the respondent while 42.3% did not know. The question on what was the anesthetic during surgery? it was not clearly answered and it was distributed around all the possibilities. As for the knowledge of who took care of the patient during surgery or resuscitated the patients? A great proportion of the respondents did not know the correct answer 43.6% 40.6% respectively. No definite correct answer indicated to the effort of the anesthesiologist. The role of the anesthesiologist for post operative analgesia was not clear in the mind of the majority of patients (Table No. 3).

Table 3
Patient's Knowledge regarding anesthesia service

	n	%
Who do you think will give you the anesthetic?		
- The surgeon	5	02.9
- Surgeon assistant	3	01.8
- Doctor specialized in anesthesia	94	55.3
- The nurse	5	02.9
- Don't know	63	37.1
Is anesthetic an intravenous injection?		
- Yes	71	41.8
- No	27	15.9
- Don't know	72	42.3
Is anesthetic during surgery:		
- Inhaled gas	64	37.6
- Intravenous anesthetic liquid	44	25.9
- Both the above	03	01.8
- Oral anesthetic liquid	03	01.8
- Oral anesthetic liquid & inhaled gas	01	00.6
- Sleeping Pills	06	03.5
- Sleeping Pills & inhaled gas	01	00.6
- Don't know	48	28.2
Who will take care of you during surgery?		
- The surgeon	30	17.6
- Surgeon assistant	13	07.6
- Doctor specialized in anesthesia	38	16.5
- The nurse	25	14.7
- Don't know	74	43.6
Who will resuscitate you during surgery?		
- The surgeon	32	18.8
- Surgeon assistant	18	10.6
- Doctor specialized in anesthesia	31	18.2
- The nurse	20	11.8
- Don't know	69	40.6
Who will insure postoperative pain management?		
- The surgeon	24	14.1
- Surgeon assistant	16	09.4
- Doctor specialized in anesthesia	21	12.4
- The nurse	55	32.4
- Don't know	54	31.7

Whatever was the patient's level or correctness of his reply or his knowledge of anesthesia practice, the patients were almost in majority happy and satisfied with the services. They welcomed more explanation regarding anesthesia choices or risk explanation (Table No. 4).

Table 4
Next day to surgery-patient's attitude towards services offered

	n	%
Did doctors offer information to you about the surgery?		
- Yes	75	44.1
- No	81	47.6
- Don't remember	14	06.3
Did doctors offer information to you about the anesthesia process?		
- Yes	047	27.6
- No	109	64.1
- Don't remember	014	08.3
Would you like detailed information on anesthesia and resuscitation?		
- Yes	95	55.9
- No	05	02.9
- Little information only. I do not like to be anxious	43	25.3
- I don't care	27	15.9
Are you satisfied with the anesthesia and surgical services offered to you?		
- Excellent	40	23.5
- Very good	74	43.5
- Good	52	18.8
- Satisfactory	17	10
- Poor	3	01.8
- No comment	4	02.4

Correlation studies of patient's status of high education, proper income and residence in cities versus proper perception of the function of the anesthesiologist, demonstrated positive correlation and was statistically significant.

The effect of patient's previous surgery experience on his response to certain questions, correlated well with true reply as to the nature of intravenous induction as mean of conducting anesthesia, that anesthesia has to be continued during surgery and that it is not a single shot (Table No. 5).

Table 5

Correlation studies: Effect of patient's previous surgery experience and answer provided

	True [answers] among (n=125) patients who had previous illness n(%)	False [answers] among (n=45) patients who had previous illness n(%)	P values	Significance
Who gave you anesthesia?	72(57.6%)	22(48.89%)	0.4048	NS
Is anesthesia produced by iv injection?	59(47%)	12(26.67%)	0.0265	S
Who took care of you during surgery?	22(17.6%)	6(13.3%)	0.66913	NS
Who continued procedure of resuscitation during surgery?	23(18.4%)	8(17.78%)	0.89465	NS
Who organized pain relief postoperatively?	33(26.4%)	18(40%)	0.12915	NS
Is anesthesia maintained during surgery?	89(71.2%)	22(48.89%)	0.01196	S

High level of education correlated well with the knowledge that anesthesia is given by physician specialized in anesthesia and that induction is done intravenously and that the anesthesiologist takes care of the patients during surgery (Table No. 6).

Table 6

Correlation studies of patient's level of previous education and the correct answer provided

	(n=97) patients who correctly answered the questions among High level of education n(%)	(n=65) patients who correctly answered the questions among Modest level of education n(%)	P values
Who gave you anesthesia?	67(69.07%)	22(33.8%)	0.0000213
Is anesthesia produced by iv injection?	51(52.58%)	18(27.69%)	0.00291
Who took care of you during surgery?	24(24.7%)	3(4.61%)	0.001609
Who continued procedure of resuscitation during surgery?	21(21.6%)	8(12.31%)	0.1898 (N.S)
Who organized pain relief postoperatively?	40(41.2%)	19(29.23%)	0.1645 (N.S)
Is anesthesia maintained during surgery?	67(69.07%)	38(58.46%)	0.2231 (N.S)

Higher income correlated well with correct knowledge that the anesthesiologist is the physician giving anesthesia, that anesthesia is induced by intravenous injection and that the anesthesiologist maintains adequate care during surgery and if needed will start resuscitation and continue post operative pain relief (Table No. 7).

Table 7
Correlation studies of patient's level of income and the correct answer provided

	Correct responses to questions among (n=43) patients of Limited income	Correct responses to questions among (n=90) Modest income	Correct responses to questions among (n=20) High income	p-value
	n(%)	n(%)	n(%)	
Who gave you anesthesia?	14(32.56%)	57(63.3%)	18(90%)	0.0000287 S
Is anesthesia produced by iv injection?	17(39.53%)	34(37.78%)	12(60%)	0.18243 N.S
Who took care of you during surgery?	6(13.95%)	13(14.4%)	9(45%)	0.00413 S
Who continued procedure of resuscitation during surgery?	5(11.62%)	14(15.56%)	8(40%)	0.0164 S
Who organized pain relief postoperatively?	7(16.28%)	38(42.2%)	12(60%)	0.001189 S
Is anesthesia maintained during surgery?	28(65.1%)	59(65.56%)	15(75%)	0.6971 N.S

City inhabitants correlated well with the correct knowledge that the anesthesiologist is the physician administering anesthesia and that anesthesia is induced by intravenous injection. They recognized that the anesthesiologist maintains care during surgery, and if need be, he may start resuscitation and continue postoperative pain relief. This was statistically significant when compared to villages inhabitants who reflected poor social, educational and awareness (Table 8).

Table 8
Correlation studies of patient's (City dweller/Outside big cities) and the correct answer provided

	Correct responses to questions among City dwellers n = 150	Correct responses to questions among Outside big cities n = 15	P values
	n(%)	n(%)	
Who gave you anesthesia?	89(59.3%)	3(20%)	0.00801*
Is anesthesia produced by iv injection?	68(45.3%)	3(20%)	0.1061*
Who took care of you during surgery?	26(17.3%)	0(0%)	0.06725**
Who continued procedure of resuscitation during surgery?	30(20%)	0(0%)	0.04236**
Who organized pain relief postoperatively?	55(36.67%)	2(13.3%)	0.12669*
Is anesthesia maintained during surgery?	102(68%)	7(46.67%)	0.16827*

* Chi square test

** Fisher's exact test

Discussion

Health awareness is improving all over the world. Saudi Arabia (S.A.) is no exception. New advanced medical services are developing and many complicated surgery is being undertaken in the S.A. Kingdom hospital.

The general public health awareness is not matched with similar awareness or perception of the special skills of anesthesiologist or anesthesia procedures. Anesthesia is a major supportive specialty which allows major advanced surgery to be performed, and the general public does not have the usual perception given to other medical specialties. The reason was eloquently put "good anesthesiologist would make patient oblivious of the perioperative period"^{1,7}. Consequently many authorities consider it imperative to educate their patients about the anesthesia activities^{1,2,5-9}. Better awareness of anesthesia activities and proper expectation by the patient would make it a public demand and would

create interest of the health administrators and help in recruiting more anesthesia related health facilities to consumers¹⁰⁻¹⁸.

Recognition of the anesthesia profession as an independent specialty would encourage future recruits to take up the specialty. Lack of recognition and decreased appreciation of the role of the anesthesiologist by the patient contributes to the frustration of the anesthetic practitioner¹¹. This study showed that there is harmony with studies of other developing countries that the patient is not well informed in the specialty, and therefore necessitating more information^{1,5}.

Majority of the patients did not have proper interview with the anesthesiologist though, most patients were ready to discuss choices of anesthesia and risk of operation. In the present study, highly educated patients with good earnings and living in cities were found to be well informed of the role and function, contrary to the illiterate isolated patients who did not have any information. This finding casts a big shadow on the validity of patient's consent and the ethics of free choice and decision about their anesthesia technique.

Anesthesiologists, in our location, should understand from this particular study that they should target individuals who are the less educated or illiterate living in primitive communities in the Kingdom, and should spend good time in the preoperative period explaining what anesthesia is about and what anesthesiologist would offer including choices of types of anesthesia techniques or post operative pain management or intensive care. This preoperative care education may be helped by pamphlets or video projections showing the anesthesiologist role in the management of surgical patients.

Anesthesia departments should uphold the image of their staff and allow them to give more time for patient interview and share with the patient the anesthesia plan. Acute pain management in the postoperative period administered by the anesthesiologist may be not obvious in institution where there is no private practice, but it may be of major impact on anesthesiologists who practice privately.

In conclusion

Anesthesia and anesthesiologist is not well perceived by those patients who are deprived from education financially poor and those who come from undeveloped areas. Effort should be directed to talk and listen to this special group in are effort to induce better comprehension of consent and to share the choice of anesthesia techniques and understand risk managements.

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