

# How Much Surgical Patients At The King Khalid University Hospital (KKUH) Know About Their Anesthesia And Anesthesiologists?

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## Citation

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## Abstract

**Background:** Patient awareness is one of the duties of the anesthesiologists in the operating theatres. However, it may be limited. Many studies proved lack of patient perception of the anesthesiologist's role in the surgical practice.

**Methods:** One hundred and seventy operative patients were interviewed by anesthesiologists in the pre-surgical period at the King Khalid University Hospital in Riyadh KSA. This paper reports the results of this prospective study on these patient's interviews and filling predetermined questionnaire by the interviewer. The survey was conducted in two session namely before anesthesia and surgery and during the first post operative day and included three sections exploring the demographical profile of the participants, knowledge about anesthesia procedure, assessment, anesthesiologists personnel, postoperative pain relief and the attitude toward the service given to them.

**Results:** Patients who recognized the anesthesiologist as specialized doctor were 55.3% and those who were recognizing he provided anesthesia services during surgical intervention were 16.5%. However there was scanty information perception regarding anesthesia procedures or anesthesiology during surgery and the role in resuscitation monitoring, postoperative analgesia. Patients showed inclination to know more about the anesthesia services and choices although they ranked the services from very good to excellent.

**Conclusions:** A reasonable percentage of the patients knew that the anesthesiologist is a doctor who administers anesthesia. The services of anesthesiologists were highly appreciated but the duties during the operation theatres and nature of anesthetics were poorly known.

## INTRODUCTION

Anesthesia in Saudi Arabia has evolved rapidly within the last few decades. The rapid development in social and cultural aspect in Saudi Arabia is fast. Although anesthesia evolved since more than 150 years in 1840s anesthesia practice was imported to Saudi Arabia through practitioners trained in Western or Eastern countries.

The general feeling is that this specialty status is low profiled if compared with other medical and surgical specialties [1]. In other countries studies of similar kind showed that the public knowledge of anesthetic practice and attitude toward the specialty is limited [2,3,4,5]. British anesthesiologists were ranked second and third with regard to prestige and to academic qualifications, respectively [6]. In

a more, in recent study, only 63% of the British patients knew that anesthesiologists were medical doctors [7]. Another study addressed the patient attitude and assessed patients' awareness of the medical and academic qualifications, duties and prestige of Finnish anesthesiologists [8]. Similar studies were conducted in Hong Kong, China, Japan Germany Canada, USA, Ireland, Australia and Pakistan [1,5, 9,10,11,12,13,14,15,16,17,18]. Patients attitude toward the service given to them were investigated 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. No study to this date monitoring the Saudi patient's attitude toward anesthesia and amount of how much he knows about this specialty.

## **PATIENTS AND METHOD**

After departmental research committee -King Khalid University Hospital- and after verbal consent and random selection using computer generated numbers a questionnaire was administered to patients scheduled for elective surgery in the surgical department of the King Khalid University Hospital in June 2004-May 2005. The patients admitted for emergency operations were excluded as well as those patients who were unable to verbally respond to the questionnaire independently. The questionnaire included three sections: Epidemiological data, assessment of patient knowledge of anesthesia, procedure and anesthesiologist activities in the perioperative period and patient's satisfaction with anesthesia services.

The patients were interviewed before surgery and satisfaction part was filled after they had fully recovered from anesthesia and within 24 hours after surgery or before discharge. The data are expressed as frequencies and percent proportions. The results were presented as numbers and percentage. Statistical analyses were used for correlations studies of the results were performed using Chi squared test Fisher's exact test, and Spearman's rank correlation when appropriate. We used in the calculation SPSS for windows statistical package.

## **RESULTS**

During the year of the study, 6000 general surgical operations were done electively. 170 patients were interviewed. They were all Saudi mean age 37 +13 years. Male/Female ratio 48.2/51.8 mostly of medium income 52.8% and educated secondary and university levels 60/6%. City residents constituted 88.2% (Table No. 1). As regard the health profile of the study sample the majority were healthy 71.2%, had previous surgery and anesthesia 73.5% and 70.6% respectively. (Table No 2). 55.3% of the patients recognized that anesthesia is given by doctor specialized in anesthesia while 44.7% either stated they did not know or gave a wrong response. Regarding induction of anesthesia intravenously or by inhalation was rightly answered by 57.7% of the respondent while 42.3% did not know. While the question on "What was anesthesia during surgery?" it was not clearly answered. As for the knowledge of "Who takes care of the patient during surgery or resuscitate 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 the patients. (Table No 3).

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

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

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

Higher education correlated well with correct knowledge of the anesthesiologist as physician given anesthesia and it is induced by intravenous injection and the anesthesiologist is well maintaining care during surgery and if need be he will start resuscitation and continue post operative pain relief (Table No 7).

**Figure 1**

Table 1: Demographical profile of the patients

	n	%
SEX		
Male	82	48.2
Female	88	51.8
Nationality		

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**Figure 2**

Table 2: Health condition of the patients interviewed

Health	n	%
- Perfect health 1 <sup>st</sup> visit to doctor	66	38.8
- Healthy 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

**Figure 3**

Table 3: Patient's Knowledge regarding anesthesia service

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

**Figure 4**

Table 4: Patient's attitude towards services offered to him next day to surgery

	N	%
Did doctors offered information to you about the surgery?		
- Yes	75	44.1
- No	81	47.6
- Don't remember	14	06.3
Did doctors offered information to you about the anesthesia process?		
- Yes	047	27.6
- No	109	64.1
- Don't remember	014	08.3
Would 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

**Figure 5**

Table 5: Correlation studies: Patient's previous surgery experience effect on his response to question

	True (n=125)	False (n=45)	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 take care of you during surgery?	22(17.6%)	6(13.3%)	0.66913	NS
Who continue procedure of resuscitation during surgery?	23(18.4%)	8(17.78%)	0.89465	NS
Who organize 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

**Figure 6**

Table 6: Correlation studies: Patient's previous education effect on his response to questions

	High level of education (n=97)	Modest level of education (n=65)	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 take care of you during surgery?	24(24.7%)	3(4.61%)	0.001609
Who continue procedure of resuscitation during surgery?	21(21.6%)	8(12.31%)	0.1898(N.S)
Who organize 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)

**Figure 7**

Table 7: Correlation studies: Correct answers to questions according to level of income

	Limited income (n=43)	Modest Income (n=90)	High income (n=20)	p-value
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 take care of you during surgery?	6(13.95%)	13(14.4%)	9 (45%)	0.00413 S
Who continue procedure of resuscitation during surgery?	5(11.62%)	14(15.56%)	8 (40%)	0.0164 S
Who organize 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

**Figure 8**

Table 8: Correlation studies: Correct reply to questions among patients from cities or villages

	City dwellers N = 150	Outside big cities n=15	P values
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 take care of you during surgery?	26(17.3%)	0(0%)	0.06725**
Who continue procedure of resuscitation during surgery?	30(20%)	0(0%)	0.04236**
Who organize 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 is no exception. Nor advanced medical services are developing and many complicated surgery is undertaken in the Kingdom hospital. The general public health awareness is not matched with similar awareness or perception of the special skills of anesthesiologist or anesthesia procedure. Anesthesia is a major supportive specialty which allows major advanced surgery to be feasible, but the general public does not have the usual perception given to other medical specialties. The reason was put eloquently that "good anesthesiologist would make patient oblivious of the perioperative period".

Many authorities would considerate imperative to educate their patient about the anesthesia activities. This is an area of further activities of patient's education. Better awareness of anesthesia area of activities and proper expectation would make it a public demand and would create interest of health administration and health facilities consumers. Better understanding and profile of the anesthesia specialties may help in recruiting more anesthesia and anesthesia related facilities. Recognition of anesthesia profession among other medical profession would help future recruits to come to the specialty. Lack of recognition and less appreciation of the patients by the role of the anesthesiologist may contribute to the feeling of frustration of the practitioner. This study showed in harmony with developing countries that patient is not well informed in the specialty and he need more information. The majority of the patients did not have a proper interview with the anesthesiologist. In contrast, most patients were ready to have discussions pertaining choice of anesthesia and discuss particular risks of the operation.

Highly educated patients who came from good earning class and lives in cities were well informed about the role of the anesthesiologist and his function. Anesthesiologists should understand from this particular study that they 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. The target individuals are the less educated and illiterate individuals and those who live in primitive communities in the Kingdom. Perioperative care education may be helped by pamphlets or video showing the anesthesiologist role in the management of surgical patients. Anesthesia departments should defend the image of their staff and allow time for patient interview and better anesthesia plan which should be shared with patients. Acute pain management in the post operative period may be not obvious in institution where there is no private practice, but it may be of major impact on anesthesiologist who practices privately.

## CONCLUSION

Anesthesia and anesthesiologists are not well perceived by the patients. It is worse with those patient who are deprived from education or poor or those who come from undeveloped areas. An effort should be done to listen and talk to this special group so they could have better consent and sharing the choice of anesthesia techniques and risk managements

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