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# Are we anesthesiologists, aware about the incidence of muscle stiffness associated with remifentanyl?

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# Patients View of the Anaesthetist in a Developing Country

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## Abstract

**Objective:** The objective of this study was to assess patients regarding their knowledge and perception of the anaesthetists' role in patient care in a developing country.

**Setting:** The audit was conducted at the Aga Khan University Hospital, Karachi.

**Methods:** Two hundred surgical and 102 medical out-patients were included in the audit prospectively who filled a detailed questionnaire.

**Results:** Fifty-six percent of the patients knew that anaesthetists were medically qualified but only 20% and 27% had an idea about their role in the intraoperative and immediate postoperative period. 14.6% were aware of the anaesthetists role outside the operating room. No difference was observed between the two groups of patients except that a higher percentage of surgical patients were interested in having more information regarding anaesthesia and wanted to choose their anaesthetist if the need arose. Gender difference was observed in answer to two questions only. A higher percentage of males know the role of anaesthetist in the recovery room whereas a greater number of females who had surgery before remembered their anaesthetist postoperatively.

**Conclusion:** The results of this audit show a poor perception of the anaesthetists role both inside and outside the operating room. Although public knowledge surveys have been carried out in developed countries there is a pressing need to repeat these in developing countries since the image as perceived by public may have a direct bearing on the recruitment of young doctors into an already shortage specialty in these less affluent countries (JPMA 49:4, 1999).

## Introduction

There is a lack of recognition of the anaesthetists role in the care of hospitalized patients both in and outside the operating room, by the medical community, medical administration and the lay public. A considerable percentage of patients are under the misconception that anaesthetists are not physicians. This figure varies from 11-50% in various studies reported from developed countries where literacy rates are high<sup>1</sup>. The problem could be a lot worse in less affluent countries like Pakistan with a literacy rate of only 27%. It is important to address this issue to enhance the image of the specialty and to promote recruitment of future anaesthetists. The present study was therefore conducted to assess the Pakistani patients knowledge regarding anaesthesiologists and also to discover if there were any gender differences in the responses or any difference in knowledge among patients presenting to medical or surgical out-patients.

## Methods

The study was approved by the ethical committee of the hospital. It was based on fourteen questions to assess the patients knowledge regarding the role of the anaesthetist. Some questions were similar to Swinhoe's study but others were added<sup>2</sup>. The questionnaire was available in two languages both English and Urdu (local language), the option of choosing either was left to the patient. If the patient was illiterate help was provided to fill in the questionnaire. Two groups of adult patients (aged more than 16) were enrolled in the study, i.e., surgical patients attending the preoperative anaesthesia clinic (group S) and medical patients attending medical consulting clinics (group M). Consecutive patients

were included. Excluded were patients who were unable to comprehend for some reason (strokes, etc.) or refusal to be included. There were no refusals. Patients were explained how to attempt the questionnaire. Each question was followed by two to five responses. They were instructed to tick a box to indicate the correct answer. They were also provided the information that some questions may have more than one correct answer. Each question had “don’t know” as an answer option. Other information recorded on the form was patients medical record number, age, educational qualification and previous anaesthesia experience.

### Statistical Analysis

The information from the survey forms was coded to convert data to a computer file. Statistical analysis was performed on Windows 95 using SPSS software package.

Descriptive statistics (mean, standard deviation and standard error of the mean) was obtained for the age of the patients. Percentages were calculated for both correct and incorrect answers regarding patient’s knowledge of the role of anaesthetist, in the two medical and surgical groups in addition to other demographic data like sex, educational qualifications and previous exposure to anaesthesia. Chi square and risk estimate analysis was done to look at relationship of responses between the two groups and to see the effect of gender. P value < 0.05 was accepted as significant.

### Results

A total number of 302 patients were included in the study. Two hundred of these patients were surgical and 102 were medical. The demographic data (age and sex) and patients exposure to previous anaesthesia are given in Table I.

**Table I. Demographic data and exposure to anaesthesia.**

Group	n	Age (years) ±SD	Sex M:F (ratio)	Previous exposure to anaesthesia (%)
Surgical (S)	200	42.6+16.7	1:1.1	60
Medical (M)	102	43.2+15.6	1:1	33

Nine percent patients answered all the questions but 98% answered 80% of the questions. The number of patients cited in analysis may, therefore, vary because of missing data from some incomplete forms.

Table II. Educational level.

Educational level	Group S (%)	Group M (%)
Illiterate	6.6	10.1
Primary school education	15.2	7.6
Secondary school education	36.4	35.5
Graduate	25.8	31.6
Postgraduate	16.2	15.2

Table II shows the educational qualification of the population.

**Table III. Patients perception of the anaesthetists role.**

No.	Questions	Surgical group Correct response (%)	Medical group Correct response (%)	P Value
1.	Are you familiar with the word anaesthesia	71.0	64.8	NS
2.	Are you familiar with the word anaesthetist	62	56.9	NS
3.	Is an anaesthetist a qualified doctor	61.0	51.0	NS
4.	During operation who ensures the well being of the patient	29.0	21.6	NS
5.	During operation once the patient is sleeping what does the anaesthetist do	54.5	47.1	NS
6.	Who looks after the patient immediately after anaesthesia	31	21.6	NS
7.	If the anaesthetist stays with the patient during operation what does he/she do	19.5	22.5	NS
8.	Do anaesthetists have any role outside the operating room	15.0	13.7	NS
9.	If anaesthetists do have a role outside the Operating room, in which area are they Important:			
	ICU	15	17.4	
	Labour ward	0.5	0.3	
	Emergency room	9.5	8.7	
	Pain relief	3.5	3.3	
	Don't know	56.5	59.6	
10.	Would you like more information about anaesthesia	71.0	58.8	<0.05
11.	If you have undergone anaesthesia before, do you remember who gave you anaesthesia	18.5	11.9	NS
12.	Are anaesthetists mostly male	17.5	16.7	NS
13.	Would you like to know who your Anaesthetist is	69.0	60.8	NS
14.	Would you like to choose your own anaesthetist, if required	18.5	33.3	<0.01

NS = not significant

Table III presents the patients perception of anaesthetists role in our region.

Sixty-nine percent of the total group was familiar with the word anaesthesia but only 60% had heard the word anaesthetist. The only significant difference seen between the surgical and the medical groups, was in the responses to question 10 and 14. In response to whether they would like more information

about anaesthesia, 71% of the surgical group said yes in comparison to 59% of the medical group ( $p < 0.05$ ). Nineteen percent of the surgical group wanted to choose their anaesthetist if the need arose in comparison to 33% of the medical group ( $p < 0.01$ ). Sixty-one percent of surgical and 51% of medical patients thought that anaesthetists were medically qualified. Only 26% of the patients were aware that anaesthetists ensure their well being intraoperatively. Twenty-eight percent in the surgical and 18% in the medical group thought it was the surgeon whereas 19.5% (group S) and 18.1% (group M) perceived it as the responsibility of the nurses. 1.5% and 2.1% in each group thought this responsibility to rest with the operating room technician. Six percent of patients in either group were under an impression that the anaesthetist either leaves the room once the patient was anaesthetized or puts another patient to sleep.

Only 31% of the responders in group S and 21.6% in group M were aware of the anaesthetists role in the recovery room. Thirty-eight and 40% respectively thought it to be solely the nurses responsibility. The rest were either not aware of this role or ascribed it to the surgeons (6%) or the operating room technician's (4%). Majority (85%) of the patients were not aware of the anaesthetists role outside the operating room.

Twenty-five percent of the patients did not want any further information regarding anaesthesia and 23% in each group categorically said they would not like to choose their own anaesthetist. Only 19% (group S) and 12% (group M) of the patients who had undergone a previous anaesthetic could remember their anaesthetist.

The results were also broken down according to the gender of the patient. The only significant difference in the responses between males and females was in answer to question 6 and question 11. In answer to "Who looks after the patient immediately after anaesthesia" 34% of the males gave a correct answer in comparison to 22% of the females. A higher percentage of female patients (21%), compared to 11% males remembered their anaesthetist.

## Discussion

Several studies have been reported from the developed world regarding patients perception of the image and status of the anaesthetist. Such data can then be used as a basis for further patient information and education and enhancing both patient and physician satisfaction. Even in developed countries with a high level of literacy the patient may not know the important role played by anaesthetist<sup>3,4</sup>. Different studies from Britain, United States of America, Australia and a teaching hospital in Austria, report that only 50-89% of patients received that anaesthetists were medically qualified<sup>5-8</sup>. In a study reported from Netherlands 80% of the patients knew that anaesthetists were doctors, in contrast to 97.6% who knew that surgeons were doctors<sup>9</sup>. Very few studies have been reported from Asian countries. In a study of 200 multicultural patients from United Arab Emirates, Kureshi et al elicited a very poor knowledge of anaesthesia<sup>10</sup>.

In spite of the variable educational level, in our study 56% of our patients were aware that anaesthetists were physicians with no significant difference among either medical or surgical group or among male and female patients.

In a survey done by Swinhoe et al (UK) 79% of the patients were aware that an anaesthetist is primarily responsible for their well being<sup>2</sup> compared to 26% in our study. The general perception in our patients therefore is that anaesthetists are not in attendance in the operating room and this needs to be changed with patient education. Only 26% of our responders were aware of the anaesthetists role in the recovery room in contrast to 55% reported in Swinhoe's study<sup>2</sup>.

Twenty-five percent of anaesthesia work is outside the operating room. Only 14.5% of our patients were aware that anaesthetist had any role outside the operating room. Among those who attempted

question 9, 16% were aware of their role in ICU, 9% in the emergency room but only 3.5% in pain relief and 0.4% in labour. Our public's knowledge of the anaesthetists involvement in the intensive care unit is quite low compared to 35.4% in a British Survey<sup>11</sup>. This can partly be explained by the lack of intensive care facility in this country. Intensive care units are available in only a few centres. There is room for considerable improvement in patient education related to this area.

Seventy-seven percent of our patients were reluctant to choose their own anaesthetist, 36% did not want any further information regarding anaesthesia. This figure is almost the same as 77%, quoted by Shevde et al<sup>6</sup>. The reasons for this given in the later survey were that, 40 patients did not know any anaesthetists, 9% believed they were unqualified to make the choice or it did not matter to 14%. The same reasons could be applicable to our population.

The two groups of patients (medical and surgical) were recruited in order to see whether the pre-surgical patients were more aware of the role of the anaesthetist. Sixty-six percent among this group had been exposed to anaesthesia and surgery before. If a difference could be elicited, the limited resources for providing information could be focused on one particular group. No difference was seen among the two groups except that a significantly greater desire to know more about anaesthesia and a desire to choose their own anaesthetist if the need arose was shown by the surgical group. This data therefore refutes the initial hypothesis that surgical patients know more about anaesthesia.

Gender could have had some effect on the results. Females have been shown to express more fears and concerns about anaesthesia compared to men<sup>6,9</sup>. This was not obvious in our survey except that there was a greater preponderance of males among those who answered correctly about the anaesthetists role in the recovery room, whereas a higher percentage of females who had previous anaesthesia remembered their anaesthetist post-operatively.

The results of this survey and those done previously in the developed countries are not very encouraging. There is a desperate need for improving the situation. This is of crucial importance in developing countries because the image of the anaesthetist has a direct implication in recruiting young doctors into an already shortage specialty. This can be done in several ways, both individual and institutional efforts are needed in addition to a more active role from local anaesthesia societies. Establishment of pre-operative clinics may have some role in enhancing the image and see the anaesthetist equivalent to other physicians. Individual efforts can be made through positive media attention to the role of the anaesthetist. Department should emphasise more contact between patient and anaesthetist at the pre-operative and post-operative period. This may happen routinely in affluent countries but in world regions where there is already a shortage of specialist anaesthetists, they are mostly confined to the operating rooms and an extra effort on their part is the need of the day.

Previous exposure to anaesthesia could have biased the results. Sixty-six percent of patients in group S and 30% in group M had been exposed to anaesthesia before but since no significant difference was seen between the two groups this variable did not seem to effect the results, however, it may have had some effect on the positive responses within the groups themselves; The previous experience nor the type of previous anaesthesia had been shown to effect patients concerns in prior studies<sup>6,9,12</sup>.

Lastly our sample population may not be truly representative of the rest of our country. The hospital where the survey was conducted is a modern 420 bed hospital based in a large metropolitan city. The hospital attracts people from various socio-economic strata and the educational qualifications of our sample population varied widely, but living in an urban environment and exposure to media may have influenced their answers. A similar study carried out in government hospitals which usually drain patients primarily from lower socio-economic strata and very low literacy rates may give different results. In addition there is a wide disparity in available health care facilities in larger cities and smaller towns and villages and people living there may not have heard the word "anaesthesia" before. It will be interesting to repeat this study to see the rural urban disparity.

Previous studies done in some countries have shown a difference in results when conducted in a



teaching hospital in comparison to a private institution. Eighty-one percent of the patients were aware that anaesthetists were doctors ma survey done in a private hospital, compared to 66% in a teaching hospital<sup>13</sup>.

## Conclusion

The results of this survey showed a poor perception of the anaesthetist role both inside and outside the operating room in our region. The results were not significantly effected by specialty the patient presented to whether medical or surgical orby gender. Additionally this survey also establishes a baseline data for regional comparison of such infonnation and an indicator to study the effect of measures which can be instituted to enhance the image of the specialty locally.

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