



Anaesthesiology- Patient perception and knowledge about the specialty and the specialist

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Abstract

Background: A certain level of knowledge about different types of anaesthesia is imperative for the patient undergoing surgery. Use of newer drugs and advances in technology has revolutionized practice of anaesthesia. The public's knowledge about anaesthesia and anaesthesiologist remains poor. There is an excellent opportunity to improve this through social media. This study was done in our hospital, in 100 patients posted for elective surgeries.

Aim: To assess the patients' knowledge of anaesthesia and role of anaesthesiologist.

Study Design: Cross sectional study over 2 months.

Methods: A predesigned questionnaire was used for evaluation of patient knowledge regarding the different types of anaesthesia and the role of anaesthesiologist.

Results: The completed questionnaires were analyzed. Age of the participants varied from 16 to 72 years, with equal number of males and females. Majority of study participants had high school education or above. Most of the patients used whatsapp and/or facebook. More than one third of the patients had at least one previous exposure to anaesthesia. Knowledge about the different techniques of anaesthesia varied widely. Awareness about importance of pre-operative fasting was restricted to 65%. Only 21% rightly answered about the routes of administration of general anaesthesia. Very few patients knew about the different types of regional anaesthesia methods, its advantages and complications. Most patients knew that anaesthesiologists were doctors and anaesthesiology was a separate medical specialty, but only very few clearly understood the perioperative roles of an anaesthesiologist.

Conclusion: Patient perception about anaesthesiology and anaesthesiologist remains poor, even in this era of information technology, despite all the recent advances witnessed by this specialty.

Keywords: patient perception, awareness, education, anaesthesiology, anaesthesia, anaesthesiologist.

Introduction

When WTG Morton publicly demonstrated ether anaesthesia for surgery successfully on October

16, 1846, a new specialty of medicine, "Anaesthesiology" was officially born. Anaesthesia is broadly classified into 2 types -

general and regional anaesthesia. With time, anaesthesiology as a specialty has evolved and grown big time in the last few decades. Newer drugs and newer techniques in anaesthesia along with advances in technology, especially with regard to patient monitoring have changed the dimensions of patient care.

Anaesthesiologist, also known as the perioperative physician, mostly works inside the operating theatre. Other than operating theatres, anaesthesiologists now play a key role in the intensive care unit, on the code team, in the pain clinic, in the labour suite, support roles in MRI and CT suites and so on. The list is not complete yet by any degree of imagination. However, anaesthesiologist often does not get due credit for the many crucial roles he plays. The public's perception and knowledge of the specialty of anaesthesiology and the role of the anaesthesiologist is still rated as poor, as evident from many previous studies¹⁻⁵

Lack of outpatient system in our specialty may be one of the reasons for this poor awareness. There is often poor rapport established between patient and the anaesthesiologist. This could be attributed to the fact that many a times, the anaesthesiologist doing pre anaesthesia assessment and anaesthesiologist administering anaesthesia are not the same.

Pre anaesthesia clinic is one place where many patient concerns and anxieties regarding anaesthesia could be addressed. It's an opportunity to educate the patient and their relatives about anaesthesia and role of the anaesthesiologist, so that many misconceptions regarding anaesthesia could be dispelled. Underutilization of pre anaesthesia clinics result in lost opportunity to spread awareness about anaesthesiology among the public. Studies have shown that proper preoperative counseling provided by the anaesthesiologist helps to reduce patient anxiety and even decrease the analgesic requirements⁶.

Postoperative pain management in the first 24 hours and follow up is another area where

anaesthesiologists have to be more proactive from a practical perspective⁷.

Recent years have witnessed widespread use of internet, television, FM radio and social media such as whatsapp and facebook, even in rural India. This has made knowledge sharing lot easier, whereby it percolates rapidly to the general public, as evident from studies². These avenues could be utilized to improve public awareness about anaesthesiology.

Against the backdrop of poor public awareness about anaesthesia and anaesthesiologist, we wanted to study if the same holds true in our setting, especially in this era of information technology, where knowledge is freely available at our finger tips. This questionnaire based study was done in 100 patients posted for elective surgeries.

Aim of the Study

To study about patients' perception and knowledge regarding anaesthesia and anaesthesiologist.

Objective

To assess the level of patient's perception and knowledge about anaesthesia and perioperative role of anaesthesiologist using a pre validated questionnaire.

Materials and Methods

This study was conducted in our hospital, a tertiary care centre, over a period of 2 months. It was a cross sectional study conducted among patients coming for pre-anaesthesia check-up using a predesigned questionnaire. It contained 17 questions regarding patients' knowledge of anaesthesiology and anaesthesiologist. 100 patients scheduled for various elective surgeries were included randomly in the study with their informed consent. Patients who were unable to speak, those with severe psychiatric or medical illness, brain injuries and those who refused to participate were excluded from the study. It was a structured interview based on a questionnaire

method. The questionnaire was made available in two languages, English and native language, Malayalam. A pilot study was undertaken in 10 individuals, to ensure that the questionnaire was easily understood. If necessary, any changes in the questionnaire could be made before proceeding to the study. If at any stage, patients needed more clarity on any particular question, it was promptly explained to them.

The questionnaire had three parts. The first part was about information regarding the patient. The second part was meant to assess knowledge about different anaesthesia techniques and associated complications. The third part was designed to assess the knowledge regarding perioperative role of anaesthesiologist.

After review of the completed questionnaire, patient and their bystanders were enlightened about the different types of anaesthesia, risks and benefits involved and perioperative as well as other newer roles of anaesthesiologist. They were given leaflets outlining this information.

Results

The patients enrolled ranged from 16 to 72 years of age. Out of the 100 patients enrolled, 50 were males and 50 females. The completed questionnaires were reviewed. The literacy level of the enrolled patients varied from post graduates to those with only primary school education, but almost 95% of patients had high school education or above.

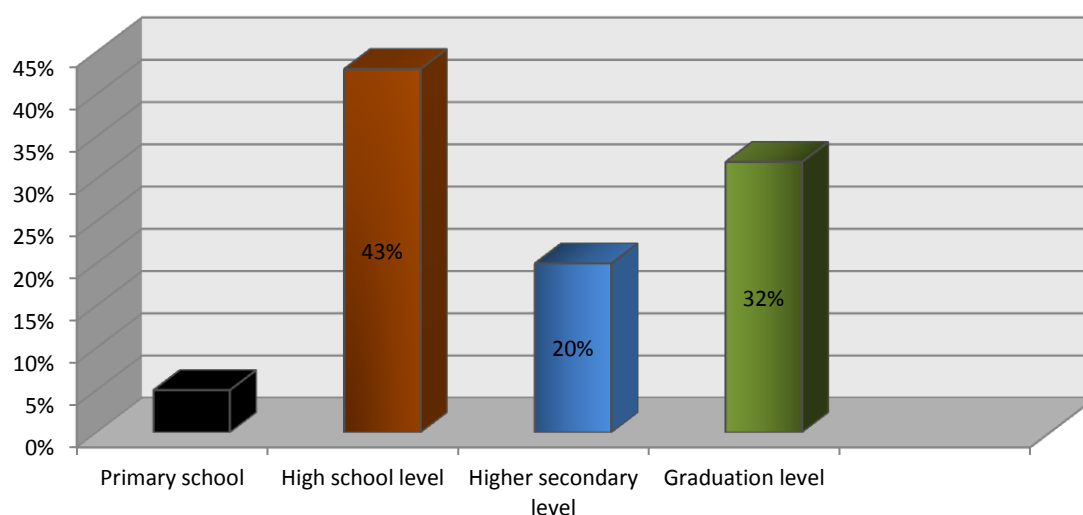


Figure 1 Level of education

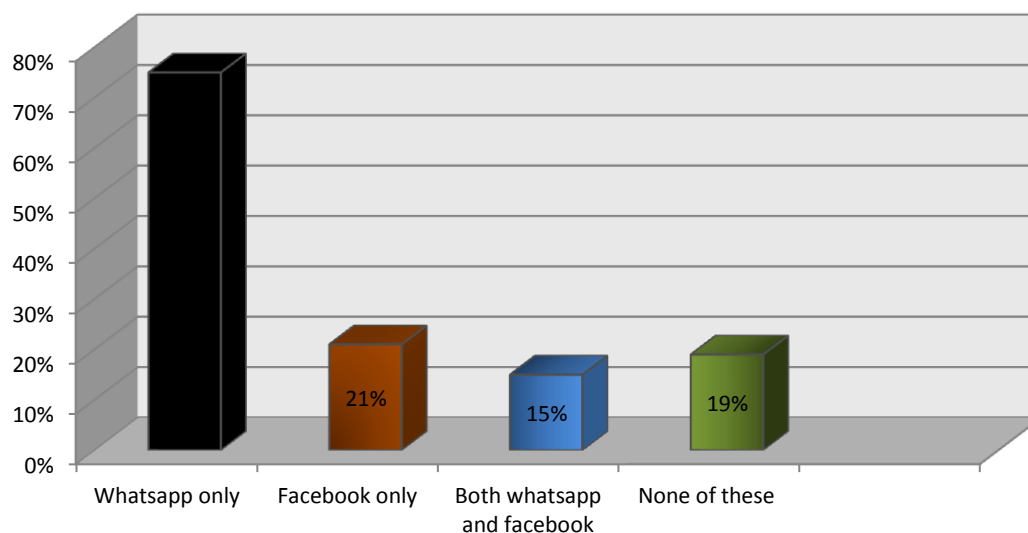


Figure 2 Use of social media

Most of the patients had access to social media such as whatsapp and/or facebook. Only 19% of

patients were of the opinion that they do not use these social platforms.

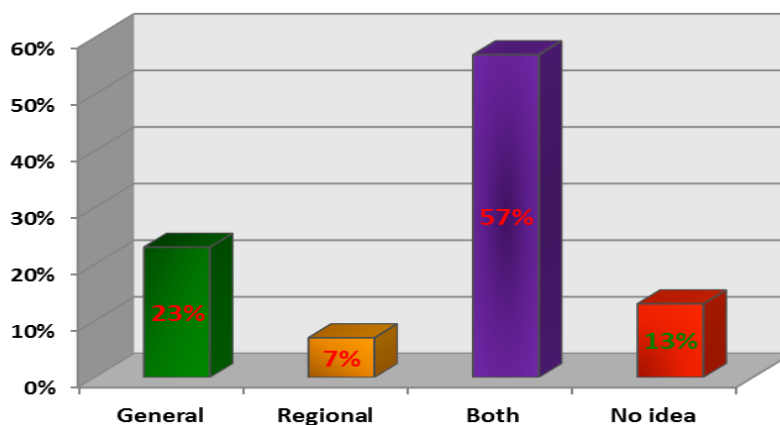


Figure 3 Knowledge about types of anaesthesia

When specifically asked about the different types of anaesthesia, 23% patients answered general anaesthesia as the only technique, while 7% knew only about regional anaesthesia. 57% knew about both general and regional anaesthesia while 13% had no idea about any of these techniques.

Majority (80%) of the patients in the group knew the type of surgery they were going to undergo, but hardly 16% of them knew about the anaesthesia technique they would probably be receiving. In other words, majority of the patients

were unaware of the anaesthesia techniques applicable or relevant for their surgery.

Interestingly, 16% patients had no idea about anaesthesia as a separate medical discipline, although 90% of the patients knew that anaesthesiologists were doctors. Except in few instances, when they were told by the attending surgeon (13%), most of the patients had this knowledge either through previous surgical experience (20%) or had heard or read about this from other sources (57%)

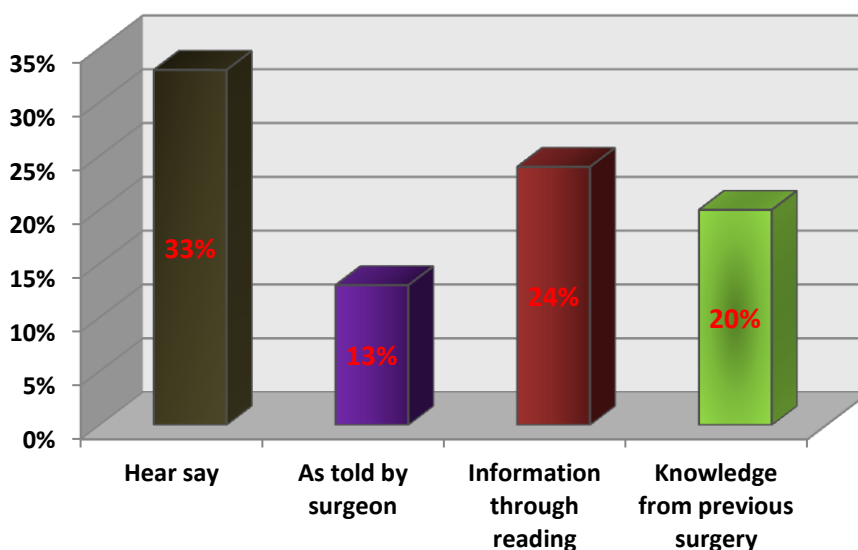


Figure 4 Source of knowledge about anaesthesiologists as doctors

In reply to a question on pre-operative fasting, 65% patients responded that they knew about it.

They were aware of the practice of abstaining from solid and liquid diet for a specified time.

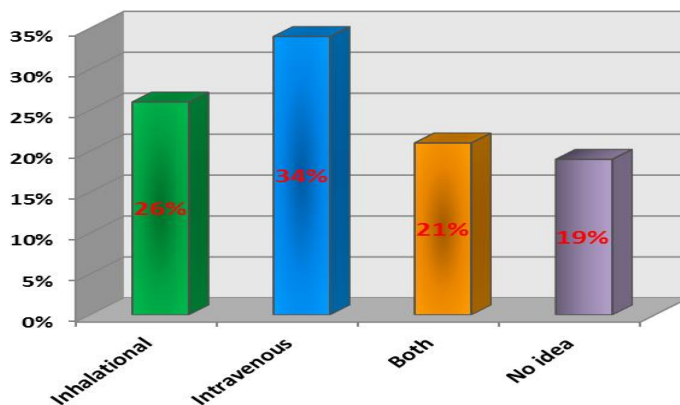


Figure 5 Route of administration of general anaesthesia

Regarding the mode of administration of general anaesthesia, 21% rightly answered that both inhalational and intravenous methods are in use. 26% of them were of the opinion that it was done only by inhalation method while 34% believed that it was done only by intravenous technique. 19% had no idea about the route of administration of general anaesthesia

Majority (80%) of our patients had no idea about complications related to general anaesthesia.

Most of our patients (89%) had no idea about the techniques of regional anaesthesia. Only 11% of patients knew about the different techniques of regional anaesthesia, which they mentioned as local anaesthesia, spinal anaesthesia and epidural anaesthesia. Further to this limited knowledge about regional anaesthesia techniques, only a minority of patients knew about associated advantages and complications.

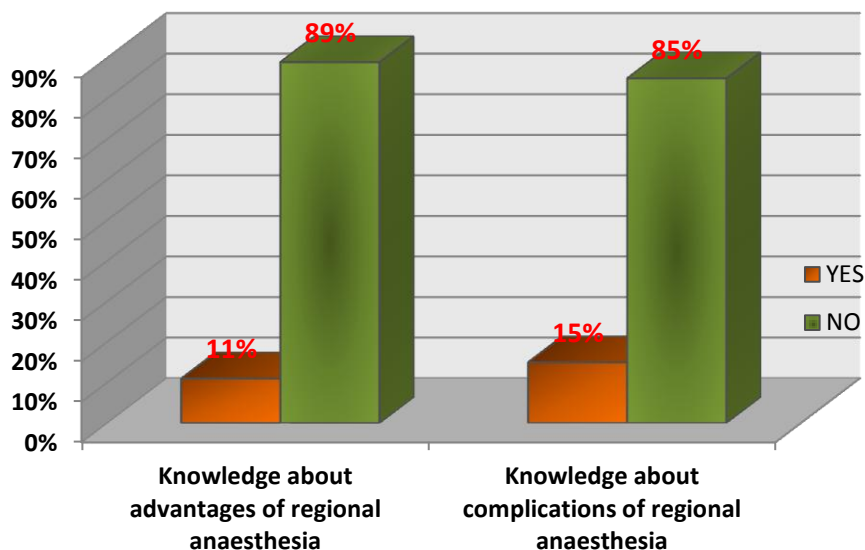


Figure 6 Knowledge about advantages and complications of regional anaesthesia

Out of 100 patients, 37(37%) had undergone anaesthesia and surgery at least once, while

63(63%) had no previous experience of anaesthesia.

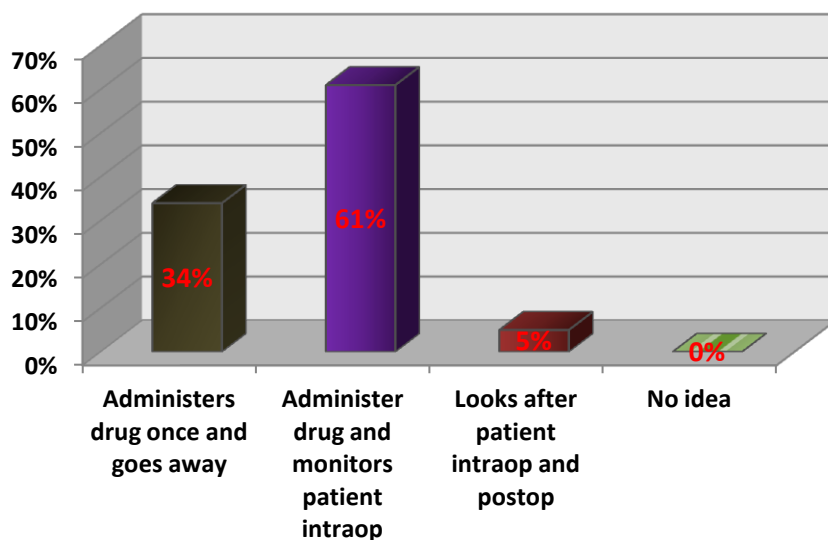


Figure 7 What does an anesthesiologist do in the operation theatre?

About one third (34%) of patients believed that anaesthesiologist administers drugs preoperatively and then goes away. 61% of patients knew that intraoperative monitoring of the vital parameters

and maintenance of hemodynamics was done by anaesthesiologist, while 5% patients knew that anaesthesiologist looks after patient during and after surgery.

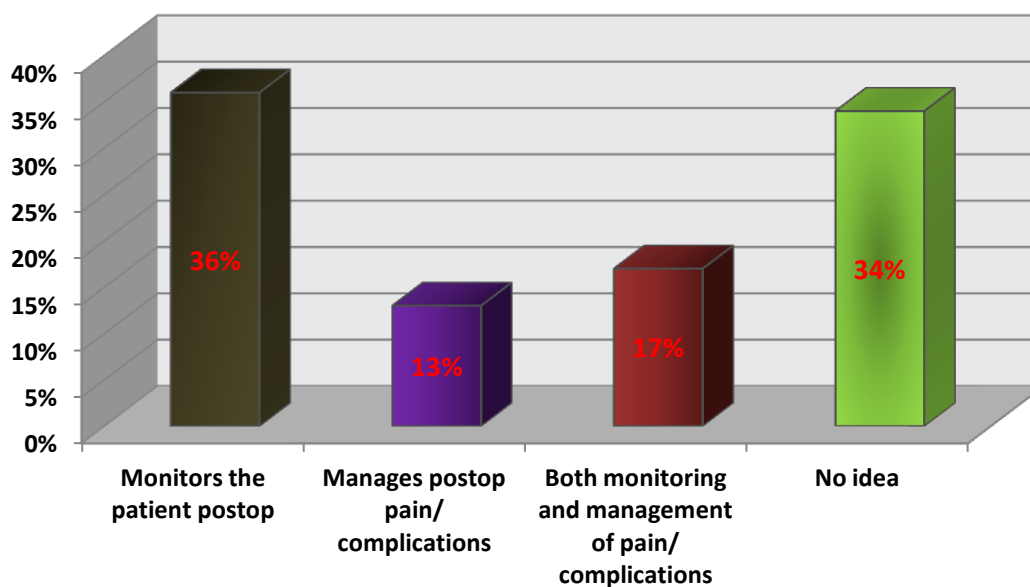


Figure 8 What exactly does an anesthesiologist do in the immediate post-operative period?

Only 17% knew about the exact role of an anaesthesiologist in the immediate postoperative period, which includes postoperative monitoring and management of pain and complications, if

any. One third of patients (34%) had no idea about role of anaesthesiologist in the immediate postoperative period.

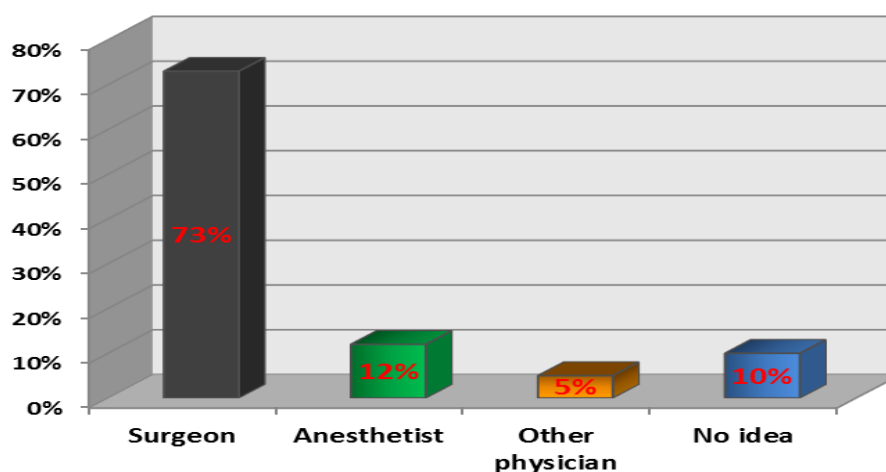


Figure 9 Who manages the immediate post op complications?

A bulk of the patients (73%) mentioned that immediate postoperative complications were managed by the surgeon. 12% believed that it was done by the anaesthesiologist while 5% thought that it was done by other physicians. The rest (10%) had no idea as to who was responsible for managing postoperative complications.

Discussion

Despite significant advances witnessed in the field of anaesthesiology and exponential growth of technology including mass media, lack of perception and knowledge about anaesthesiology among the public is evident. It's important that the patient populations, particularly those about to undergo surgical procedures, are well educated about anaesthesia and various roles played by anaesthesiologist.

Most of our patients had high school education or above. In the study by Gurunathan et al, no statistical significance was obtained between literacy rates and knowledge about the field of anaesthesiology³. However contrasting findings were obtained in the study by Naithani et al, where a significant correlation was noted between patient's knowledge on anaesthesia and literacy levels⁴.

Patient's previous exposure to anaesthesia and surgery did not seem to have much impact on the level of knowledge about anaesthesia^{2,3}. In our study, more than one third of patients had previously undergone surgery at least once.

Along expected lines, usage of social media was high among the study participants (81%). In the study by Lee et al, about one third patients attributed their perception about perioperative role of anaesthesiologist to mass media such as television (80%) and internet (20%)². Mass media and social media, being so popular could be used efficiently to enhance public knowledge about anaesthesia.

The knowledge about different types of anaesthesia has been traditionally poor among the general public. In the study by Khara et al, the proportion of patients who knew about both general and regional anaesthesia was only 17%⁵. Even in our study, 13% patients had no idea whatsoever, about either of these techniques. More than half of our patients knew about both general and regional anaesthesia, but it's still a low score by the literacy standards of our state.

Bulk of the study group (80%), had good understanding about the type of surgery they were about to undergo but hardly 16% patients knew about anaesthetic techniques relevant for that particular surgery. This could be attributed to better patient relationship with surgeon when compared to anaesthesiologist.

Only 65% patients knew the importance of pre-operative fasting. In the study by Gurunathan et al, 73% believed preoperative fasting was needed, but 35% didn't know the reason for that³.

In response to a question on routes of administration of general anaesthesia, 21% rightly answered that inhalational and intravenous methods are used. This figure stood at 10% in the study by Khara et al⁵.

A large proportion (80%) of patients in our study was ignorant about the complications of general anaesthesia. This dismal figure is reminiscent of another Indian study by Naithani et al where only 15% patients had knowledge about anaesthesia risks as stated in the consent form and about 35% aware of the information contained in consent form⁴.

Another key statistic is the high proportion (89%) of patients in our study group without any idea about the different techniques of regional anaesthesia. This figure is surprisingly higher than expected from our state, even when compared to the Khara et al study, where 61% had no idea about the many techniques of regional anaesthesia⁵. In addition to this, only a minority of our patients knew about the advantages as well as complications associated with regional anaesthesia. This low patient awareness about the potential complications associated with anaesthesia could be due to inadequate time spent by anaesthesiology doctor in explaining these risk factors, implicit trust in surgeon or signing consent form without understanding what it says.

Majority of the patients in our study knew that anaesthesiologists were doctors unlike in few western studies from the seventies which showed that only 50% to 67% knew this^{8,9}. Even in some recent Indian studies, only 33% knew the anaesthesiologist as a doctor¹⁰.

The knowledge about anaesthesiology as a separate medical specialty was fairly good (84%). Our results were consistent with the study findings of Gurunathan and Jacob³, whereas study results by Singh et al showed that only 42% were aware about anaesthesiology as a separate discipline¹⁰. In another study, one fourth of the respondents did not know that an anaesthesiologist administers anaesthesia for surgery². These findings indicate

the scarce understanding of the actual roles of an anaesthesiologist.

Almost one third of patients believed that the anaesthesiologist administers drug and then goes away. This was in contrast to the findings of the surveys conducted in developed countries where majority (89%) of patients felt that the anaesthesiologist stays during operation to look after their vitals⁹. Role of anaesthesiologist after induction was not clear to many patients in some previous studies. In a study by Chew et al from Singapore, only 18% of the patients could identify the anaesthesiologist as the primary care giver intraoperatively, while 37% identified the surgeon responsible for looking after them during the surgery¹¹.

Regarding intra operative period, 61% of patients knew that monitoring of vital parameters and maintenance of hemodynamics was done by anaesthesiologist. 5% patients thought that anaesthesiologist does something during and after the surgery. In another study from India, 63% felt that the role of the anaesthesiologist in operation theatre is to put the patient to sleep, while 22% identified the anaesthesiologist as the person who will resuscitate the patients in case of any eventuality intraoperatively⁵. This poor understanding of the role of anaesthesiologist is very evident in other studies too⁴. Only 42% patients knew that anaesthesia was administered by anaesthesiologist while 27% knew that besides administration of anaesthesia, it was the duty of anaesthesiologist to monitor and take care of the vital signs intraoperatively⁴.

The role of anaesthesiologist in the immediate post-operative period is unclear to most patients. One third of patients (34%) had no idea at all. In our study, 17% knew the exact role, which includes postoperative monitoring and management of pain and complications, almost consistent with the study results of Singh et al.¹⁰

Our study seems to indicate that patients generally believed the surgeon to be responsible (73%) for managing immediate postoperative complications. Only 12% believed that it was done by the

anaesthesiologist, although these figures were slightly better when compared to the results from the study by Mathur et al¹²

The public needs to be educated well about the preoperative, intraoperative and postoperative roles carried out by anaesthesiologist, which makes us very aptly being addressed to as the “perioperative physicians”. In addition to this, emphasis should be laid on highlighting the various other areas in which we often operate and manage which include code team, intensive care, chronic pain and palliative care, obstetric services, interventional neurology, cardiology and radiology procedures, gastrointestinal endoscopic procedures and so on.

A good rapport established with the patient by the anaesthesiologist during pre anaesthesia assessment reinforced by a postoperative visit will certainly better the patient satisfaction and perception about our specialty. This has been demonstrated before¹³.

As an outcome of this study, to improve patient knowledge about the specialty and the specialist, we plan to make an information sheet for patients, clearly highlighting the different types of anaesthesia, risks and benefits involved and role of anaesthesiologist in perioperative as well as numerous other areas of patient care. This information sheet would be printed in English and Malayalam, and would be distributed to patients when they are seen by anaesthesiologist in the preoperative assessment clinic.

Conclusion

Patient perception and knowledge about anaesthesiology and anaesthesiologist has been always poor. Even in this era of information technology, the level of knowledge about anaesthesiology and anaesthesiologist is clearly inadequate, albeit, the big strides made by the specialty and the ever increasing duties and responsibilities of the specialist even beyond the operating rooms. It is important to efficiently use the pre anaesthesia assessment clinics, mass media and other social media avenues and ensure better

postoperative follow ups for creating better patient awareness about anaesthesiology and anaesthesiologist.

Sources of support- Nil

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