CLINICAL RESEARCH / KLİNİK ÇALIŞMA

KNOWLEDGE OF PATIENTS ABOUT ANESTHESIOLOGISTS: A CROSS-SECTIONAL STUDY FROM TURKEY

HASTALARIN ANESTEZİYOLOGLAR HAKKINDAKİ BİLGİLERİ: TÜRKİYE'DEN KESİTSEL BİR ÇALIŞMA

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ABSTRACT

Objective: *It is important for anesthesiologists to establish an instructive and revealing relationship with patients, in order to combat their fears and to provide wholesome perioperative period. However, patients mostly don't meet their anesthesiologists. The aim of this survey was to assess the perception of Turkish patients toward anesthesiologists at a hospital in Ankara.*

Method: *A survey designed to evaluate patients' knowledge and preferences toward anesthesiologists was completed by 1994 patients attending preanesthetic evaluation clinic at a teaching hospital.*

Results: *A total of 2010 patients were enrolled; however; 0.7% didn't complete the survey. Among 1994 patients, 1.9% were illiterate. When reviewed in the aspect of prior anesthetic experience; it was found to be 58.1%. Of all patients 66.3% knew that an anesthesiologist was a medical doctor specialized in anesthesia. Only 37.4% told that an anesthesiologist was also in charge of intensive care unit. The most feared issue was not waking up after surgery. Most patients (63.7%) didn't find anesthesiologists as communicative and thus, wanted to get more information from the anesthesiologist.*

Conclusion: *The patients are still unaware of anesthesiologist and their responsibilities. The results of this study can attract attention regarding the education of patients about anesthesia and anesthesiologist in Turkey.*

KEYWORDS: *Anesthesiologist, Knowledge, Patients*

ÖZ

Amaç: *Anesteziyologların hastaların korkuları ile mücadele etmek ve sağlıklı bir perioperatif dönem geçirmelerini sağlamak için hastalarla öğretici ve açıklayıcı bir ilişki kurmaları önemlidir. Bununla birlikte, hastalar çoğunlukla anesteziyologlarıyla görüşmezler. Bu anketin amacı Ankara'da bir hastanede Türk hastaların anesteziyologlara yönelik algılarını değerlendirmektir.*

Yöntem: *Prenestezik değerlendirme için hastanemizin anestezi kliniğine başvuran hastalara, yöneltilen anket uygulamasıyla 1994 hasta anesteziyologlar hakkındaki bilgi ve tercihleri açısından değerlendirildi.*

Bulgular: *Toplam 2010 hastaya anket dağıtıldı; ancak; % 0.7'si anketi tamamlamadı. Anketi tamamlayan 1994 hastanın % 1.9'u okuma yazma bilmiyordu. Daha önce anestetik deneyim açısından hastalar gözden geçirildiğinde; bu oran % 58.1 olarak bulundu. Tüm hastaların % 66.3'ü bir anestezistin anestezi konusunda uzman bir tıp doktoru olduğunu biliyordu. Sadece % 37.4 'ü anestezi uzmanının yoğun bakım ünitesinden de sorumlu olduğunu söyledi. En korkulan konu ameliyat sonrası uyanamama idi. Çoğu hasta (% 63.7) anesteziyologları konuşkan bulmadığını ve bu nedenle anesteziyologlardan daha fazla bilgi almak istediğini açıkladı.*

Sonuç: *Hastalar halen anesteziyologların ve sorumluluklarının farkında değildirler. Bu çalışmanın sonuçları, hastaların Türkiye'de anestezi ve anestezi uzmanlık eğitimleri konusunda dikkat çekebilir.*

ANAHTAR KELİMELER: *Anesteziyolog, Bilgi, Hastalar*

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INTRODUCTION

Modern technological and scientific advances in surgical procedures makes modern practice of anesthesiology mandatory. These procedures not only improve the importance of anesthesiologists, but also expand their responsibilities.

However, studies related to public, and even other doctors' awareness of anesthesiologists don't support this scene. Both curiosity and ignorance about anesthesia and anesthesiologists had been a matter of question for many years (1). Hume et al. associated this situation to less communication of anesthesiologists with patients, and other doctors, probably due to more time spent with unconscious patients instead of sufficient preanesthetic visits special to them (2).

In Turkey, anesthesiology had been accepted officially as a specialty in 1956. Since then, a few former studies conducted related to anesthesiology have shown that the level of information of patients about anesthesia was poor. Thus; it is not clear; whether these people are aware of anesthesiologists as medical doctors, since commonly, the role of anesthesiologists has been underestimated in the population.

We hypothesized that patients in our population still ignore anesthesiologists, their responsibilities inside or outside of operating rooms. With this background, we planned this study to identify the current status of perception of anesthesiologists in a section of Turkish population, referring to preanesthetic evaluation clinic of our hospital. On the other hand; by this assessment; we tried to increase the sensitivity and awareness of the population against anesthesiologists and anesthesia.

MATERIAL and METHOD

We performed this study as a survey in preanesthetic evaluation clinic at "Atatürk Training and Research Hospital " in Ankara, in three months period. The study was approved by our hospital's ethics committee and individual written consent was obtained from the patients accepting to participate the survey. The survey was quoted from a study on the same subject and translated originally to Turkish in a shortened form (3). A total of 2010 adult patients admitting to our preanesthetic evaluation clinic, in this period were distributed the survey, but only 1994 patients returned it back completely. The patients were >18 years old, and Turkish-speaking. The bed-ridden, unconscious, mentally disabled or inarticulate patients were not included in the study.

Patients answered standardized questions about their characteristics (age, gender, education level), medical history, description of anesthesiology as an occupation and the responsibilities of anesthesiologists inside and outside the operating room. After completion of the questionnaire; they were collected by the anesthesiology resident. Soon, the patients were again delivered a booklet explaining the answers of the questions in the survey. Thus, we aimed to educate, at least this population, admitting to our hospital.

Statistical Analysis

The study was planned as a cross-sectional study. The consecutive patients referring to preanesthetic evaluation clinic of our hospital between 1 August to 31 October, 2015; were delivered the survey.

Data analysis was performed by using IBM SPSS Statistics, version 19.0 (IBM Corp, Armonk, NY, USA). Data were shown as number of cases and percentages. Categorical variables were analyzed by Chi-square or Fisher's exact test, where appropriate. A "p" value less than 0.05 was considered statistically significant.

RESULTS

The study was conducted in 1994 patients (43.5% females) completely. Among these patients, the majority were in the range of 40-49 years of age (24.1%). The patients >70 years of age made 6.9% of this population. 31.6% of them were graduated from primary school, while this was followed by high school with a prevalence of 30.8%. 1.9% were illiterate. 21.2% of the patients attained university level. When reviewed in the aspect of prior anesthetic experience; the prevalence was 58.1 %. Of these participants; 480 (41.4%) had experienced more than one anesthetic experience (Table 1). The patients were asked about the best description for an anesthesiologist. 66.3% (1322 patients) of the patients responded this question as a medical doctor specialized in anesthesia. The number of patients answering this question correctly were significantly lower in 20-29 years of age group in comparison to 30-59 years of age group ($p=0.047$). 16.6% (332 patients) of the patients had no idea about it (Figure 1). 78% of the patients told that anesthesiologists were the doctors determining whether the patients were fit for surgery or not. This information was significantly high in the patient group having previous anesthetic experience ($p<0.001$). Also these patients answered that they knew the anesthesiologists were the ones putting them to sleep and waking them up ($p<0.001$ and $p=0.034$).

In regard to responsibilities of the anesthesiologists, the patients graduated from university replied the questions significantly more correctly than the others ($p<0.05$) (Table 2). 1532 patients (76.8%) told that they

Table I. Patient demographics and clinical characteristics

Characteristics	n (number of patients)	%
Age groups		
<20 y	101	5.1
20-29 y	286	14.3
30-39 y	465	23.3
40-49 y	480	24.1
50-59 y	298	14.9
60-69 y	226	11.3
≥70 y	138	6.9
Gender		
Female	867	43.5
Male	1127	56.5
Educational level		
Illiterate	38	1.9
Primary school	630	31.6
Secondary school	290	14.5
High school	615	30.8
University level	421	21.2
Prior anesthetic experience		
No	835	41.9
Yes	1159	58.1
Number of anesthetic experiences		
Once	679	58.6
More than once	480	41.4

didn't get any information about anesthesia before, and 63.7% of all showed willingness to get information. The female patients, the patients in 50-59 years of age were the ones significantly more enthusiastic to get information about anesthesia ($p=0.002$ and $p<0.05$). Learning about anesthesia before surgery was high among the patients graduated from a university ($p<0.001$). The most feared issue about anesthesia was; being unable to wake up after surgery (22.5%). The female patients were significantly more afraid of anesthesia than the male ones ($p<0.001$).

Table II. Responses regarding the places where the anesthesiologists are in charge of

Does anesthesiologist work at...	n (number of patients)	%
operating room?		
Yes	1401	70.3
No	88	4.4
I don't know	505	25.3
Pain clinic		
Yes	431	21.6
No	581	29.1
I don't know	982	49.2
Intensive care unit		
Yes	746	37.4
No	364	18.3
I don't know	884	44.3
Blood bank		
Yes	164	8.2
No	934	46.8
I don't know	896	44.9
Emergency room		
Yes	627	31.4
No	528	26.5
I don't know	839	42.1
Delivery room		
Yes	820	41.1
No	355	17.8
I don't know	819	41.1
Preanesthetic evaluation clinic		
Yes	1377	69.1
No	60	3.0
I don't know	557	27.9
Cardiac catheterization laboratory		
Yes	433	21.7
No	516	25.9
I don't know	1045	52.4

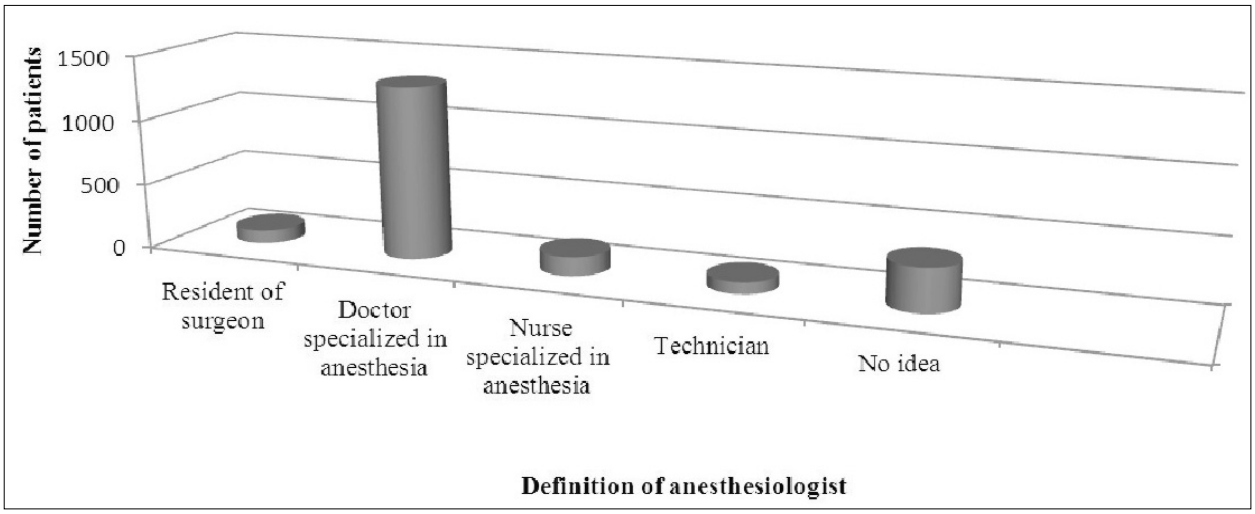

Figure 1. Responses regarding the definition of anesthesiologist

DISCUSSION

This is the most extensive study questioning the awareness of public about anesthesiologists and anesthesia performed in Turkey, to date. The result of this study shows that still almost one third of the population (33.7%) doesn't perceive anesthesiologists as medical doctors specialized in anesthesia. Unfortunately, this finding is even higher than the one reported previously in a smaller sample sized, Turkish population (4). Only a small portion of our patients thought that anesthesiologists were specialized nurses. However; the percentage of patients having no idea about was more than 10%. In an earlier study, 66% of patients were reported to think that an anesthesiologist was no more than a technician and he worked under the control of a surgeon (5). In the last forty years, this perception has been changed due to developments in preoperative teaching by various channels and thus; the percentage of patients regarding anesthesiologist as a medical doctor is increased from 50% to 90% (6,7). Actually, studies from different countries have variable results (3,8-10). In Braun et al.'s study, 90.5% of 200 patients surveyed at pre-admission clinic were reported to be aware of medically qualification of anesthesiologists (11). Mavridou et al. declared that 94.2% of 500 patients knew that the anesthesiologist was a specialized doctor (12).

The stratification of the patients according to age groups showed that our patients between 50-59 years of age had the highest rate in defining "anesthesiologist" correctly. Unfortunately, younger and older people (less than 29 and more than 70 years of age) had the lowest rates, though not evidenced statistically. This could be attributed to lack of communication of anesthesiologists with all sections of the population. Old Turkish people don't improve themselves in new areas, and think anesthesiologists as technicians or nurses as in previous days; because anesthesia is still a newly developing medical branch in Turkey. On the other hand probably; younger people have not previously met anesthesiologists before, since they are already healthy.

The results in our study indicated that; educated patients knew who an anesthesiologist was more clearly, than illiterate ones, similar to other studies. This finding is supported by Mathur et al.'s study (13). He classified the study population into five groups according to their educational status and found out that postgraduate people had highest rate for exact definition of an anesthesiologist.

The responsibilities of anesthesiologists have been shown not to be definitely perceived by the public. Our results indicated that most of the patients didn't know our roles either intraoperatively, (eg: blood transfusion decision), or postoperatively (eg: management of patients in intensive care units or pain clinics). Previous studies from developing countries reported a general lack of knowledge in patients about the indispensability of anesthesiologists in the intraoperative period, whereas majority of the patients from developed countries were reported to know that an anesthesiologist should attend the operation from the beginning up to the end (14-16).

Except educational level, we determined that previous experience was the other important role in patients' behaviors against anesthesiologists and anesthesia. The patients referring to our hospital were unaware of anesthesia substantially (76.8%). However; those who had a surgical experience before, reported that the anesthesiologists were the ones deciding whether they were fit for surgery or not. Baja et al. also suggested that knowledge of patients about anesthesiologists increased by experience and interest (17). Our results indicated that illiterate patients, female patients and the ones between 50-59 years of age had strong desire regarding the information about anesthesia and even about complications in comparison to the others. Thus; the patients should meet their anesthesiologists preoperatively instead of taking information about anesthesia from surgeons (12).

In our study, fear was mostly related to not waking up after anesthesia. As evidenced statistically, female patients were afraid of this factor more than the males. However, in Mavridou et al.'s study; not waking up after surgery was the second most common source of patients' fear. The fear about general anesthesia was in the least affected by patients' age, level of education, and previous experience (18).

Similarly, educational level and previous surgery were ineffective in our study also. On the contrary to these; Elmore noticed that, 63% of the patients reporting fear; had higher educational levels in comparison to 22% in the opposite group (19). This could be attributed to more information obtained by these people about risks and complications of anesthesia.

We delivered a very simple booklet containing only answers of the questions surveyed. One limitation of this study was not being able to test the patients again following this teaching. Thus, we are not certain if the returned booklets improved the patients' perspectives about us.

The results of this study declared that anesthesiologists and anesthesiology were still poorly perceived by the public. Educating people about anesthesia, anesthesiologists and anesthetic plan and caring about conscious patients outside the operating rooms should be our duties.

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