Effect of previous anesthesia experience on patients’ knowledge and desire for information about anesthesia and the anesthesiologist: A 500 patients’ survey from Greece

P. MAVRIDOU (*), V. DIMITRIOU (*), M. PAPADOPOULOU (*), A. MANATAKI (*), E. ARNAOUTOGLOU (***) and G. PAPADOPOULOS (***)

Abstract: Background: This study aimed at assessing the effect of previous anesthesia experience on patients’ knowledge of anesthesia and the role of anesthesiologists, on what they would want to know about anesthesia and the way they would like to be informed.

Methods: Questionnaires with fixed questions were distributed to consenting, consecutive surgical patients before the pre-anesthetic visit. Patients were divided into two groups: patients with previous anesthesia experience (Group A) and patients without previous anesthesia experience (Group B). The questionnaires included patients’ demographics, questions related to their knowledge about the anesthesiologists’ role and about their desire for information.

Results: 500 questionnaires were analyzed. The majority of patients (94.2%) know that the anesthesiologist is a specialized doctor and 89.2% believe that the anesthesiologist watches over the patient throughout surgery. These results were similar in both groups. The majority of patients (98.2%) also want to meet the anesthesiologist before surgery and 78% want even more information. Only 65.6% want to be aware of all possible complications, in both groups, while 17.6% do not want to know anything about complications. In general, answers to specific questions regarding what the patients want to know about anesthesia did not differ between groups. The vast majority of patients wish to talk with the anesthesiologist before surgery.

Conclusion: Previous anesthesia experience did not seem to influence patients’ desire for meeting the anesthesiologist and seeking information. A strong desire to personally meet the anesthesiologist is expressed and patients’ desire for even more information is noted.

Key words: Previous anesthesia; questionnaire; patient knowledge; patient information.

INTRODUCTION

The patients’ first contact with the anesthesiologist (which is often their only opportunity for valid information) still commonly takes place the day before surgery, during the preoperative assessment. The value of the preoperative visit and its reassuring and calming effect has already been known since 1963 (1) and has been confirmed years later (2). However, in so far as, most of the time, the preoperative visit aims mainly at patients’ clinical assessment, the patients’ expectation to be informed about anesthesia often remains unfulfilled. The information they get is frequently vague and partial.

Information about anesthesia has various effects on patients. In most studies, providing information about anesthesia does not seem to affect their state of anxiety or fear (3). There are some studies though, where anxiety seems to decrease (4) and others where a significant raise of patients’ anxiety was reported, after reading a brochure with information about anesthesia (5). Therefore, anesthesiologists should be very careful about the quality and quantity of information provided. Information should be accurate and not over extended, it should not contain obscure medical terms, and it should answer to questions that concern patients the most.

Paraskevi MAVRIDOU, M.D., Anesthesiologist; Varvara DIMITRIOU, M.D., Resident Anesthesiologist; Maria PAPADOPOULOU, M.D., Anesthesiologist; Adamantia MANATAKI, M.D., Consultant Anesthesiologist; Eleni ARNAOUTOGLOU, M.D., Ph.D., Associate Professor of Anesthesia; Georgios PAPADOPOULOS, M.D., Ph.D., Professor of Anesthesia.

(*) Hatzikosta General Hospital, Anesthesiology Department, Ioannina, Greece.
(**) University Hospital of Ioannina, Anesthesiology Department, Ioannina, Greece.

Correspondence address: Dr. Paraskevi Mavridou, Hatzikosta General Hospital, Anaesthesiology Department, Makriyianaki Avenue, 45001, Ioannina, Greece. Tel.: +302651080537, Fax: 00302651080538. E-mail: voulam@otenet.gr
The aim of this study was to record patients’ knowledge about the role of anesthesiologists, what they would want to know about anesthesia, the way they would like to be informed and whether all these are affected by patients’ previous anesthesia experience.

Materials and Methods

The study was conducted following our hospital’s Ethics and Deontology Committee and National Center of Health Management approvals. It took place in a tertiary hospital that serves Northwestern Greece and a lot of the Ionian Islands. Questionnaires were used.

The questionnaires were distributed to consecutive patients, scheduled for non-life threatening surgery, a few hours before the preoperative anesthetic visit on the day before surgery. All included patients gave their consent after having been informed about the purpose of the study and having been reassured that the questionnaires would remain anonymous.

Exclusion criteria included day case surgery, patients under the age of 18 years, those with communication problems, illiterates, those who did not speak Greek fluently, and those who did not speak Greek fluently, and those who were physically unable to answer to the questionnaire personally (patients in poor general condition, blind patients, etc … ). All sample questionnaires that were illegible or not fully answered were excluded from further analysis.

Patients were divided into two groups. The first group (Group A) included patients with a previous anesthesia experience. The second group (Group B) contained patients who were about to experience anesthesia for the first time. The questionnaire started with questions on patients’ demographic data (age, gender, education). The following questions were multiple choice questions. Patients had to tick whichever preselected answer they considered to be right. The first set included questions regarding the patients’ knowledge about the anesthesiologist, his/her education, his/her role during surgery, his/her participation in out of the theatre medical acts, and his/her importance during the perioperative period.

The second set included questions regarding their wish to meet the anesthesiologist before surgery, and their wish to be informed about anesthesia. There were also questions about the exact information patients would like to receive, with two preselected options : ‘yes I would like to know” and “no I would not like to know”. Some of the questions were comparable to those contained in previously published studies (6, 7). An original question concerned the complications they would like to be aware of. The last question was about the way patients would like to be informed.

Data were analyzed using Statistical Package of Social Science 13.0 for Windows (SPSS Inc., Chicago, IL). Descriptive statistics (frequency distributions) were used for patients’ demographics and answers to all questions. The $\chi^2$ test was used to compare responses to questions between groups of patients. A P value less than 0.05 was considered as statistically significant.

Results

Five hundred fully answered and legible questionnaires out of 540 distributed questionnaires were analyzed (response rate 92.5%). Group A (previous anesthesia experience) included 330 patients (66%) and Group B (first anesthesia experience) included 170 patients (34%). Demographic data of patients are presented in Table I.

The answers regarding patients’ knowledge about the anesthesiologist revealed that 94.2% of patients knew that the anesthesiologist was a specialized doctor and that 89.2% were convinced that the anesthesiologist was watching over the patient throughout surgery. The anesthesiologist’s occupation in the Intensive Care Unit and the Emergency Department was also known by a large percentage of patients (65.4% and 57%, respectively). Although there were multiple choice answers to questions, 10% of patients still ignored all other areas were an anesthesiologist might be occupied, apart from surgery. Previous anesthesia experience did not affect any of these answers. Detailed questions and answers are presented in Table II.

Almost all patients (98.2%) wanted to meet the anesthesiologist before surgery as to obtain additional information from him/her. Seventy-eight % of all patients, including those who had had anesthesia before, felt they were not having enough information about anesthesia, and expressed their need for further information. Regarding the questions related to what patients want to know about anesthesia, there were no statistically significant differences between the two groups, except for two topics. Patients with previous anesthesia experience were more prone to have information on how they would feel after the procedure, and on who would
be the anesthesiologist in charge. All questions and answers are again presented in details in Table III.

The answers to questions related to potential complications are given in Table IV.

Finally, a small percentage of all patients (7.8%) wanted to be informed by a brochure only, 45.8% preferred to be informed through a personal interview with the anesthesiologist, and 46.4% wanted both an interview and a brochure. The vast majority of patients preferred a personal conversa-

**DISCUSSION**

In Greece, recently, a new Code of Medical Ethics has been applied (2005). It has clarified patients’ rights to informed consent. It is now
obligatory for the anesthesiologist to fully inform the patient in order to help him consent, but there is no clear picture on what patients really want to know about anesthesia. The aim of this study was to collect information about our patients’ wishes and needs in this area and to assess whether they are affected by previous anesthesia experience or not. The results of this study can help in establishing guidelines for proper patients’ information, and help in better applying new legislation.

Before discussing the results, it is worth mentioning that Group A (previous anesthesia experience) included more women. This is probably related to a more frequent anesthesia experience in women because of their obstetric history. Group A also included more patients over the age of 45. Indeed, the probability of having previous anesthesia experience increases with age.

Patients’ knowledge about the anesthesiologists’ role and education is, surprisingly, much better than we expected. A considerable percentage of patients (94.2%) know that anesthesiologists are specialized doctors, a percentage similar to other countries such as Israel (8) or Finland (9), while in Switzerland, the percentage reaches 99% (10). It is worth mentioning that in Greece, unlike other countries, there is no Certified Registered Nurses Anesthetists (CRNA), and that anesthesia practice

### Table III

<table>
<thead>
<tr>
<th></th>
<th>Total patients (n = 500)</th>
<th>Group A (previous anesthesia) n = 330</th>
<th>Group B (first anesthesia) n = 170</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>I want to know:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>When I will be allowed to stand up from bed</td>
<td>458 (91.6)</td>
<td>299 (90.6)</td>
<td>159 (93.5)</td>
<td>0.310</td>
</tr>
<tr>
<td>If I will feel nauseous after anesthesia</td>
<td>443 (88.6)</td>
<td>286 (86.7)</td>
<td>157 (92.4)</td>
<td>0.074</td>
</tr>
<tr>
<td>How I will feel after anesthesia</td>
<td>440 (88.0)</td>
<td>281 (85.2)</td>
<td>159 (93.5)</td>
<td>0.006*</td>
</tr>
<tr>
<td>When I will be allowed to go back to work</td>
<td>437 (87.4)</td>
<td>295 (89.4)</td>
<td>142 (83.5)</td>
<td>0.066</td>
</tr>
<tr>
<td>How long I will have drips or catheters</td>
<td>436 (87.2)</td>
<td>291 (88.2)</td>
<td>145 (85.3)</td>
<td>0.397</td>
</tr>
<tr>
<td>If I have to stop or not the medications I already take</td>
<td>432 (84.6)</td>
<td>279 (84.5)</td>
<td>153 (90)</td>
<td>0.100</td>
</tr>
<tr>
<td>How long I will be anesthetized</td>
<td>432 (86.4)</td>
<td>284 (86.1)</td>
<td>148 (87.1)</td>
<td>0.785</td>
</tr>
<tr>
<td>If I will be in pain after surgery, for how long, and what sort of pain killers I will have</td>
<td>429 (85.8)</td>
<td>281 (85.2)</td>
<td>148 (87.1)</td>
<td>0.592</td>
</tr>
<tr>
<td>What will happen if I have to be transfused</td>
<td>417 (83.4)</td>
<td>277 (83.9)</td>
<td>140 (82.4)</td>
<td>0.704</td>
</tr>
<tr>
<td>How I will have to prepare for my anesthesia</td>
<td>419 (83.8)</td>
<td>279 (84.5)</td>
<td>140 (82.4)</td>
<td>0.525</td>
</tr>
<tr>
<td>Who will be the anesthesiologist in charge of my operation</td>
<td>417 (83.4)</td>
<td>265 (80.3)</td>
<td>152 (89.4)</td>
<td>0.011*</td>
</tr>
<tr>
<td>Alternative methods of anesthesia and their advantages and disadvantages</td>
<td>375 (75.0)</td>
<td>248 (75.2)</td>
<td>127 (74.7)</td>
<td>0.914</td>
</tr>
<tr>
<td>When I will be allowed to eat and drink</td>
<td>366 (73.2)</td>
<td>237 (71.8)</td>
<td>129 (75.9)</td>
<td>0.340</td>
</tr>
<tr>
<td>What kind of drugs I will receive for anesthesia</td>
<td>332 (66.4)</td>
<td>216 (65.5)</td>
<td>116 (68.2)</td>
<td>0.55</td>
</tr>
</tbody>
</table>

* p < 0.05.

<table>
<thead>
<tr>
<th></th>
<th>Total patients (n = 500)</th>
<th>Group A (previous anesthesia) n = 330</th>
<th>Group B (first anesthesia) n = 170</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regarding complications, do you want to know details about:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Common complications</td>
<td>40 (8.0)</td>
<td>33 (10)</td>
<td>7 (4.1)</td>
<td>0.022*</td>
</tr>
<tr>
<td>Rare complications</td>
<td>44 (8.8)</td>
<td>34 (10.3)</td>
<td>10 (5.9)</td>
<td>0.098</td>
</tr>
<tr>
<td>All possible complications</td>
<td>328 (65.6)</td>
<td>208 (63)</td>
<td>120 (70.6)</td>
<td>0.092</td>
</tr>
<tr>
<td>None of the complications</td>
<td>88 (17.6)</td>
<td>55 (16.7)</td>
<td>33 (19.4)</td>
<td>0.445</td>
</tr>
</tbody>
</table>

* p < 0.05.
exclusively depends on the anesthesiologist. Previous experience with anesthesia does not seem to affect patients’ knowledge about the role of the anesthesiologist. This is in accordance with the results of other studies (8).

A remarkable percentage of patients know that the anesthesiologist attends to the patient throughout surgery (89.2%). This finding is similar to previously published results (11), but much higher than others (12, 13). These percentages are variable across countries and depend on study year of publication. Our patients’ good knowledge of the role of the anesthesiologist compared to the one reported in older studies can be attributed to several factors. Nowadays, people have easier access to the internet, where they can extract information. In addition, the media more frequently offer a vitrine to the anesthesiology specialty.

The anesthesiologists’ activities out of the theatre and specifically in the ICU (65.4%) is better known in Greece than in other countries, such as in the UK (32%) (14), or the Caribbean, where only 19.4% of patients know that anesthesiologists are involved in the ICU (15). A possible bias of our study, regarding this point, is the fact that our patients could choose possible answers from a fixed list. We believe that the percentages would be significantly lower if this question had been an open one. However, we consider this part of the questionnaire as a useful tool of information, in line with other authors (16).

The vast majority of patients (98.2%) express a desire to meet the anesthesiologist before surgery. Relevant studies in Scotland, Canada and Australia have similar results (8, 9). Patients’ intense desire to meet the anesthesiologist before surgery can be attributed to their lack of information. Patients tend to believe that a personal interview allows establishing a better doctor-patient relationship, where they can express their fears while being reassured by the anesthesiologist and being helped to cope with preoperative anxiety (17).

Furthermore, a considerable percentage of patients believe that they don’t have enough information about anesthesia. Seventy-eight % wants more information, while, in the study by KAIN et al., this percentage reaches 85% (18). In the present study, both groups express their desire for further information. This should put us in thoughts, because it means that a substantial amount of patients with previous anesthesia experience had not an adequate and satisfying preoperative visit at the time of their previous contact with anesthesia.

Regarding the nature of needed information, all patients in both groups are more interested in simple, practical matters, such as when they will be able to get out of bed, whether they will be nauseous or vomiting or when they will be able to return to work. They seem to be less interested in more specific information such as the kind of drugs received or different methods of anesthesia. The marked differences with other studies relate to priority and importance given to specific pieces of information (8, 9, 19). Previous anesthesia experience does not affect most of the information needs.

The kind of potential complications patients would like to be aware of is highly variable. Therefore, it is obvious that we cannot adopt the same information policy for all patients. The information process should be personalized, each patient should receive the amount and the kind of information he/she wishes, so that he/she is purposefully informed, and not over worried.

The choice of means used to inform patients is not easy. In our study, a very low percentage wishes to be informed exclusively by a leaflet. Most patients want a personal interview with the anesthesiologist alone or in combination with a leaflet. Patients generally like to have access to an information brochure in addition to the information received orally (20). It is worth mentioning that anesthesiologists consider the distribution of information brochures useful, as reported by Chapman in his study, where 83% of anesthesiologists support the existence of a leaflet with information about hazards related to anesthesia (21). Other means are of interest, such as video projections (22), websites (3) and group sessions (23). Those means have successfully been applied in other countries. They were deliberately excluded from our study, because of difficulties in easily applying them in Greek hospitals nowadays, for financial, technical or other reasons.

Patients’ need for a personal interview with the anesthesiologist alone, or combined with an information leaflet is unquestionable. Previous anesthesia experience does not affect this need. The already well known value of the preoperative visit is once again confirmed. Several reasons may be invoked to explain this fact. The preoperative visit is often the only chance for patients to personally meet the anesthesiologist. During this visit, questions can be answered and various topics can be clarified, even for patients who have a previous anesthesia experience. A trustful patient-doctor relationship can be built at that time, and patients’ anxiety can be reduced. In particular, as far as Greek patients are
concerned, and driven by their temperament, they tend to believe that a personal interview will motivate the anesthesiologist to their best interest.

In conclusion, patients are better informed about the role of the anesthesiologist than we expected. We consider that the most important outcome of our study is that patients have a strong desire to personally meet the anesthesiologist before surgery and get as many information they can, regardless their previous anesthesia experience. Apparently, previous anesthesia experience does not significantly affect patients’ knowledge about anesthesia and their desire for information, except for some particular topics. Therefore, we should not consider these patients as better informed and we should treat them with the same caution and sympathy as the first-timers, informing and supporting them according to their needs.

References