Informed Consent and Decision Making by Cataract Patients

Christopher G. Kiss, MD; Sibylla Richter-Mueksch, MD; Eva Stifter, MD; Gabriela Diendorfer-Radner, PhD; Michaela Velikay-Parel, MD; Wolfgang Radner, MD

**Objectives:** To investigate decision making by patients on the day before cataract surgery and to evaluate to what extent the informed consent process influences the patients' decision regarding consent.

**Methods:** On the day before surgery, 70 patients (mean±SD age, 70.3±10.3 years) underwent a standardized informed consent procedure. They were also invited to answer 15 questions established in interdisciplinary cooperation among clinical psychologists, lawyers, and ophthalmologists.

**Main Outcome Measures:** We assessed presurgical information and personal estimation of risks in cataract surgery; the patient-physician relationship regarding surgery-related decisions; and evaluations of the informed consent procedure and the patients' decision.

**Results:** Questionnaire answers indicated that 28 (40%) of the 70 participating patients arrived for surgery without any information; 16 (23%) believed that there were surgical procedures without risks; and 53 (76%) estimated that there were no risks for their cataract surgery. A physician-dominated decision for surgery was preferred by 31 patients (44%); 16 (26%) wanted to decide together with their ophthalmologist. Possible risks of a sight-threatening complication did not influence 54 patients' (77%) decisions, and 55 patients (78%) said the informed consent process did not influence their decision. The remaining 15 (22%) stated that the informed consent process positively confirmed their decision.

**Conclusions:** Informed consent 1 day preoperatively does not seem to influence the decision for cataract surgery. Cognitive dissonance as part of a decision-making process makes changes in an already chosen option unlikely. The resulting limited decisive potential is very important for credibility in a trial and has to be considered in ophthalmologic surgery.


**MEDICO LEGAL ISSUES ARE**

**gaining interest as the threshold for suing a physician or hospital declines worldwide.** In ophthalmology, cataract surgery is the most frequently performed surgery and, as such, is the most common cause of ophthalmologic malpractice litigation, representing one third of all cases against ophthalmologists. In the majority of cases, no adverse events happen, since cataract surgery has become more controlled and the risk of complications is relatively low. Nevertheless, the number of claims in this field is still constantly increasing.

**CME course available at**

www.archophthalmol.com

For a malpractice claim to be initiated, negligence, injury, and the proximate cause have to be evident. However, malpractice in this sense is often hard to prove, and therefore inadequate or lack of informed consent is used as a secondary cause in more than 90% of all ophthalmologic malpractice cases. In contrast, it is the primary reason in only 5% to 6% of claims.

Supreme courts in the United States as well as in Europe have stated the requirements for patient information in several decisions. The description of the treatment and the alternatives, inherent risks (if they are material), and the postoperative period must be covered. The situation is similar in the United States and Austria, as the guidelines published by Lancston match the requirements in Austria. Jurisprudence expects physicians to thoroughly inform the patients about inherent risks, but patients may refrain from necessary treatment because of an excess of information. Thus, by being legally obligated to obtain informed consent prior to medical treatment, physicians in the United States and Europe have to walk a tightrope between informing patients sufficiently and frightening them. Informed consent, however, is an essential element
of communication with the patient that is traditionally one of the most important parts of medical treatment.

Communication with patients is the physician's tool in anamnesis to identify, with the patient, the best possible treatment. Because of medicolegal developments in the past few years, this communication requirement for treatment is at risk of degenerating into merely fulfilling the legal requirements and serving as evidence in a physician's defense.9 The physician's communication with the patient is, and has always been, a very sensitive element in successful treatment. Thus, legal influences in this important domain of medical treatment have the potential to adversely affect the quality of the patient's treatment.

Although failure to obtain informed consent does not constitute malpractice, claims by patients that they would not have consented to the procedure had they received sufficient information have often resulted in condemnation by the court and a judgment of liability on the part of the physician. This situation is particularly unfortunate because it has been well documented in several clinical studies that very little of the information given during the informed consent procedure can be retained and recalled correctly by the patients even 1 day after the surgery.10-15 This connection between patients' inability to remember and their allegation of not having been sufficiently informed once they have experienced an adverse effect has focused our interest on the patient's decision-making process during the informed consent procedure.

METHODS

The study was performed at the Department of Ophthalmology and Optometry of the University of Vienna, Austria, and followed the requirements of the Declaration of Helsinki.

A consecutive series of 70 patients (mean ± SD age, 70.3 ± 10.3 years) who were scheduled to undergo cataract surgery was asked to participate in a study about informed consent.

Patients who had previously had eye surgery were not included in the study. A written informed consent document was established and used as a template for our standardized informed consent procedure. The written information included an explanation of the word cataract; the method of surgery (ie, phacoemulsification with posterior chamber lens implantation); the risks, including an estimation of their likeliness; the postoperative period; possible refractive outcomes and the rate of surgical success; and alternatives. We explained all medical expressions using layperson's terms. Informed consent was then established and used as a template for our standardized informed consent procedure. The written information included in the study. A written informed consent document was established and used as a template for our standardized informed consent procedure. The written information included an explanation of the word cataract; the method of surgery (ie, phacoemulsification with posterior chamber lens implantation); the risks, including an estimation of their likeliness; the postoperative period; possible refractive outcomes and the rate of surgical success; and alternatives. We explained all medical expressions using layperson's terms. Informed consent was then established and used as a template for our standardized informed consent procedure. The written information included in the study. A written informed consent document was established and used as a template for our standardized informed consent procedure. The written information included an explanation of the word cataract; the method of surgery (ie, phacoemulsification with posterior chamber lens implantation); the risks, including an estimation of their likeliness; the postoperative period; possible refractive outcomes and the rate of surgical success; and alternatives. We explained all medical expressions using layperson's terms. Informed consent was then established and used as a template for our standardized informed consent procedure. The written information included in the study. A written informed consent document was established and used as a template for our standardized informed consent procedure. The written information included an explanation of the word cataract; the method of surgery (ie, phacoemulsification with posterior chamber lens implantation); the risks, including an estimation of their likeliness; the postoperative period; possible refractive outcomes and the rate of surgical success; and alternatives. We explained all medical expressions using layperson's terms. Informed consent was then established and used as a template for our standardized informed consent procedure. The written information included in the study. A written informed consent document was established and used as a template for our standardized informed consent procedure. The written information included an explanation of the word cataract; the method of surgery (ie, phacoemulsification with posterior chamber lens implantation); the risks, including an estimation of their likeliness; the postoperative period; possible refractive outcomes and the rate of surgical success; and alternatives. We explained all medical expressions using layperson's terms. Informed consent was then established and used as a template for our standardized informed consent procedure. The written information included in the study. A written informed consent document was established and used as a template for our standardized informed consent procedure. The written information included an explanation of the word cataract; the method of surgery (ie, phacoemulsification with posterior chamber lens implantation); the risks, including an estimation of their likeliness; the postoperative period; possible refractive outcomes and the rate of surgical success; and alternatives. We explained all medical expressions using layperson's terms. Informed consent was then established and used as a template for our standardized informed consent procedure. The written information included in the study. A written informed consent document was established and used as a template for our standardized informed consent procedure. The written information included an explanation of the word cataract; the method of surgery (ie, phacoemulsification with posterior chamber lens implantation); the risks, including an estimation of their likeliness; the postoperative period; possible refractive outcomes and the rate of surgical success; and alternatives. We explained all medical expressions using layperson's terms. Informed consent was then established and used as a template for our standardized informed consent procedure. The written information included in the study. A written informed consent document was established and used as a template for our standardized informed consent procedure. The written information included an explanation of the word cataract; the method of surgery (ie, phacoemulsification with posterior chamber lens implantation); the risks, including an estimation of their likeliness; the postoperative period; possible refractive outcomes and the rate of surgical success; and alternatives. We explained all medical expressions using layperson's terms. Informed consent was then established and used as a template for our standardized informed consent procedure. The written information included in the study. A written informed consent document was established and used as a template for our standardized informed consent procedure. The written information included an explanation of the word cataract; the method of surgery (ie, phacoemulsification with posterior chamber lens implantation); the risks, including an estimation of their likeliness; the postoperative period; possible refractive outcomes and the rate of surgical success; and alternatives. We explained all medical expressions using layperson's terms. Informed consent was then established and used as a template for our standardized informed consent procedure. The written information included in the study. A written informed consent document was established and used as a template for our standardized informed consent procedure. The written information included an explanation of the word cataract; the method of surgery (ie, phacoemulsification with posterior chamber lens implantation); the risks, including an estimation of their likeliness; the postoperative period; possible refractive outcomes and the rate of surgical success; and alternatives. We explained all medical expressions using layperson's terms. Informed consent was then established and used as a template for our standardized informed consent procedure. The written information included in the study. A written informed consent document was established and used as a template for our standardized informed consent procedure. The written information included an explanation of the word cataract; the method of surgery (i-
None of those surveyed had used the Internet or other sources to receive information (question 2). Of the 70 patients, 16 (23%) believed that there were surgical procedures that have no risk of complications (question 3); all of these 16 respondents belonged to the low-education group.

Difficulty of Cataract Surgery (Question 4)

Cataract surgery was thought to be a relatively easy procedure, with 69 patients (99%) choosing answers between 1 and 3 on a scale where 1 was easy and 5 was difficult (mean±SD, 1.97±0.90).

Risk of Adverse Events (Questions 5 and 6)

Regarding patients' estimation of adverse events occurring during their cataract surgery, 53 patients (76%) said they believed that there was no risk at all of any complication (question 5; mean±SD, 1.34±0.72). However, if they were then asked to estimate the likelihood of a severe complication occurring during their surgery, only 42 (60%) continued to maintain that there was no such risk (question 6). Thus, it appears that pointing specifically to a more striking event changed the patients' awareness of the risk (Figure 2).

Influence of Imminent Risks on Decision (Question 7)

The risk of a severe and probably sight-threatening complication did not influence the decision of 54 patients (77%) about whether they wanted the surgery (mean±SD, 1.27±0.56). At this point, most of the patients clearly stated that since cataract surgery was indicated, they had come to have their cataract removed and were not willing to refrain from the procedure just because of possible complications.

PHYSICIAN-PATIENT RELATIONSHIP

Decision Making (Questions 8 and 11)

Thirty-one patients (44%) wanted the physician alone to decide for or against surgery, 12 (17%) preferred a physician-dominated decision, 18 (26%) wanted to come to a decision together with their ophthalmologist, and 9 (13%) wanted to come to a decision by themselves. The mean±SD score of 2.20±1.36 (Figure 3A) indicated that the patients wished to have a more physician-dominated decision. Among the 70 patients, 23 (33%) said that their ophthalmologist had made the decision for surgery; 22 (31%) said the decision was made consensually; and 25 (36%) said they had decided alone (question 11; mean±SD, 2.90±1.63).

Decision About Surgical Method (Question 9)

Sixty-seven patients (97%) (Figure 2B) wished to leave the decision about the choice of surgical procedure to the physician alone. They said that they knew nothing about it and therefore did not want to be involved or to interfere.

Confidence in Medical Staff (Question 10)

The patients not only expected that their physician would choose the appropriate surgical method, but they also had a very high level of confidence in their physicians in general, since 66 (94%) said that they were rather confident or very confident (mean±SD, 4.70±0.62). The range of answers, between 2 and 5 on a scale of 1 to 5, showed that people were not afraid to be honest.

PATIENT’S EVALUATION OF INFORMED CONSENT

Influence of Informed Consent on Decision (Question 12)

Of the 70 patients responding, 55 (78%) stated that the given information did not influence their decision (mean±SD, 1.63±1.34) (Figure 4). The other patients who indicated an influence were asked whether this influence was positive or negative. All of them said that the informed consent highly confirmed their decision, because it was a sign of competence for them. Thus, it ap-
pears that patients are glad to be informed but do not want to rethink their decision.

**Emotional Impact (Questions 13-15)**

Forty-eight patients (69%) said they felt fairly or very secure because of the informed consent (question 13; mean±SD, 3.87±1.43). Our informed consent procedure did not increase insecurity, because 63 patients (90%) answered “not at all” when asked if the information made them feel insecure (question 14). Only 10 (14%) of the 70 patients said they had some mild concerns (mean±SD, 1.14±0.35; range, 1-2) about their operation after the information about possible complications was given. These were patients who came completely uninformed and thought that cataract surgery was a completely harmless procedure. In summary, the questions concerning the patients’ evaluation of the informed consent revealed that it makes patients feel more secure but does not influence their decision.

**COMMENT**

In his numerous publications, Kraushar2,5-7,9,15,16 has elaborately illustrated the medicolegal jurisdiction in ophthalmology. In particular, his work has dealt with litigation regarding the informed consent procedure. He has concluded, “Litigation for medical malpractice is rarely based only on lack of informed consent. The informed consent part of a lawsuit may be the most difficult to defend, however, since it will often depend on credibility.”9 Although failure to obtain informed consent does not constitute malpractice, a patient’s claim that sufficient information would have led to not consenting to the treatment often results in condemnation. Thus, in the present study, we investigated, on the day of admission for cataract surgery, the basic views of patients, their decision-making process, and to what extent informed consent influenced their decision about consent.

When they came to the ward, the patients were generally poorly informed and underestimated the risk of complications. They preferred a physician-dominated decision process and said that informed consent did not influence their decision. In particular, the information about sight-threatening complications did not influence their decision for cataract surgery. This observation is interesting, since many patients in court claim that they would never have consented to the surgery if they had known what could happen. To elucidate this bias between our results and the allegations of patients in court, the psychological background of the human decision-making process has to be taken into account, since cognitive dissonance17 might provide an explanation for the observed contradiction.18 Communication-related changes in the attitude of a person can occur when the content of a message causes inconsistency19 (eg, when something that was originally linked with positive associations becomes connected with negative objections). This kind of situation causes a cognitive stress situation (ie, cognitive dissonance). Since humans inevitably need to achieve an equilibrium within themselves to feel comfortable with a decision, this dissonance can only be overcome either by enhancing the positive attitude or by devaluing the objections. To achieve this equilibrium, a person selects the option with the least cognitive complexity.19 Furthermore, before a final decision is made, the perception of a given piece of information is often

![Figure 3](image-url)  
*Figure 3. Patients tended to prefer a physician-dominated decision for cataract surgery (A) and surgical method (B).*

![Figure 4](image-url)  
*Figure 4. Most of the patients stated that the informed consent information did not alter their decision. All patients stating that the information had some influence said their decision to have cataract surgery was highly confirmed by informed consent.*
selective, and information processing is biased in favor of the already chosen alternative. In accordance with this observation, a recent publication on dependencies in the decision-making process between cognitive dissonance and the sequence of presentation of information has shown that people tend to prefer and to give excessive weight to information that is in favor of their existing decision when the alternatives are presented sequentially and allow a selection. These decision-making processes are, of course, also applicable to our cataract patients. They came to the ward having made the decision to have cataract surgery, and then they were confronted with information regarding possible complications, information that was capable of causing them discomfort or cognitive dissonance. To decrease the upcoming dissonance between the decision already made (i.e., to have cataract surgery) and possible adverse effects, the patients had to relativize the unfavorable information.

Cognitive dissonance also serves as a likely explanation for the findings of Morgan and Schwab and Pri-luck et al, who have shown that their patients could not recall crucial details of their preoperative conversation as little as 1 day after surgery. Thus, if patients in court claim that they have not heard about a certain consequence, they are not necessarily lying, since cognitive dissonance causes selective perception and cognitive information processing. Thus, cognitive dissonance and the resulting decision-making behavior of human beings make changes in an already chosen option rather unlikely. This is particularly true for patients when the operation is objectively indicated and constitutes a possible solution for their problem. The limited decisive potential caused by cognitive dissonance is very important for the question of credibility in a trial and has to be taken into account.

Our results have also shown that the patients preferred a physician-dominated decision-making process; they stated that they were very confident in their surgeon, although they had seen that physician for the first time, and only for a short time, on the day of hospital admission. Most patients interpreted our standardized informed consent procedure as a sign of competence that confirmed their decision. This once again seems to indicate the typical preoperative mood of believing in and hoping for the best, but it also shows that even an extensive informed consent document clearly seems to increase the preoperative comfort of the patients.

Courts in the United States and Europe have stated that the day before surgery is an appropriate time to obtain informed consent. However, Leydhecker et al have shown that 36% of patients would have preferred hearing the information at the time that their surgery was scheduled; 65% would have liked it at least a few days before the surgery. Our results are in agreement with the findings of Leydhecker, and we therefore believe that the patients can better be reached by providing sufficient information earlier.

In summary, informed consent 1 day preoperatively does not seem to be effective in influencing the decision for or against cataract surgery. Cognitive dissonance as part of the decision-making process has to be considered in medicolegal issues, since changes in an already chosen option can cause difficulties, particularly when surgery is objectively indicated.

REFERENCES