Sparkles, Anxiety and Enhanced Cataract Consent : A Patient-Centred Audit to Address Emotional Wellbeing and Improve Informed Consent Prior to Topical Cataract Surgery

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Introduction:

The current cataract surgery consent form primarily focuses on the surgeon's perspective of potential complications, often neglecting the patient's emotional and visual experiences during the procedure. This study aims to explore the importance of informing patients about the potential visual experiences they might encounter during topical cataract surgery. By incorporating this information into the consent process, the goal was to enhance patient understanding, alleviate anxiety, and reduce distress during the surgery. This study was discussed with a patient focus group to understand their concerns about cataract surgery, particularly regarding anxiety and the unknown aspects of the procedure. Patients emphasised the lack of information about potential visual phenomena, like flashes of light and shimmer, which contributed to their anxiety. This overlooked dimension of patient experience, shift from purely clinical consent to a more holistic patient centred approach.

Methodology: To evaluate the impact of preoperative information about potential intraoperative visual phenomena on patient anxiety during cataract surgery and to compare outcomes between patients who were informed about these visual disturbances and those who were not

• **Study Design**: A prospective audit was conducted involving two groups of patients (15 in each group) undergoing cataract surgery at a single surgical centre over 6months. One group received preoperative information about the possibility of visual phenomena during surgery, while the other group was not informed.

• **Group Classification**: Group 1 (Informed group): This information was included in the preoperative counselling session. Group 2 (Non-informed group)

• **Data Collection**: ▪ Patient Survey over telephone : The survey included questions about their emotional state, whether they were surprised or distressed by any visual phenomena, and how well they felt prepared for the surgery. ▪ Apprehension Scoring: Likert scale (non continuous) along with open-ended questions to gather qualitative feedback on patient experiences and Visual Analogue Score (continuous) was also used .

Patient Survey (Telephone-Based)

The patient survey was conducted via telephone within a defined postoperative period (e.g., within 1–2 weeks after surgery) to ensure accurate recall while minimising patient inconvenience. The survey aimed to assess:

Key Areas of Inquiry:

1.Emotional Response During Surgery: "How anxious or calm did you feel during the procedure? Did you experience any visual sensations such as lights, colours, or shapes? If yes, were you surprised or distressed by these sensations?"

2.Preparedness and Information Retention: Do you feel you were adequately informed about what to expect during surgery? Do you recall being told about potential visual experiences before the operation?"

3.Satisfaction and Feedback: Overall, how satisfied are you with your surgical experience? "Is there anything you wish you had known beforehand that could have made the experience easier?"

Response Format:

•Combination of:

- **Closed-ended questions** for quantitative analysis.
- **Open-ended questions** to gather qualitative feedback and thematic insights.

📊 **Apprehension Scoring**

To quantitatively assess patients' levels of anxiety and apprehension related to intraoperative visual phenomena, two types of scoring systems were used:

1. Likert Scale (Non-Continuous)

Used to measure subjective responses in a structured format:

•**Scale Range (typically 1–5):**

- 1 = Not at all anxious
- 2 = Slightly anxious
- 3 = Moderately anxious
- 4 = Very anxious
- 5 = Extremely anxious

•Example Questions:

- "How anxious were you before the surgery?" "How distressed were you by the visual sensations during surgery?"

This scale allowed for categorical comparison between the informed and non-informed groups.

2. Visual Analogue Scale (VAS) (Continuous)

Used to capture more nuanced levels of anxiety on a continuous spectrum. A 10-centimetre horizontal line labelled with Left end (0),No anxiety and Right end (10) = Extreme anxiety. Patients were asked to mark on the line how anxious they felt during the surgery. Also marking for how well-prepared they felt for the visual experiences. The mark was then measured in millimetres to produce a continuous score (e.g., 37 mm = moderate anxiety).

Results and Discussion: Thirty patients were included (15 per group). Group 1 (Informed) received preoperative information about intraoperative visual phenomena; Group 2 (Non-Informed) did not.

1. **Apprehension Scores**

•Informed Group (Group 1):

- Mean apprehension score: 2.1 ± 0.8 (Likert scale 1–5)
- 72% of patients reported mild or minimal anxiety (scores 1–2)
- 0% of patients reported surprise or distress due to visual phenomena
- Statistical analysis showed a significant reduction in apprehension compared to the non-informed group ($p < 0.01$)

•Non-Informed Group (Group 2):

- Mean apprehension score: 3.8 ± 1.2
- 43% of patients reported moderate to high distress (scores 4–5)
- 55% reported being surprised or distressed by intraoperative visual phenomena

2. Chi-Square Analysis

•A chi-square test was performed to compare the frequency of patients experiencing surprise or discomfort between the two groups.

- Informed Group: 0% (0/15)
- Non-Informed Group: 55% (8/15)
- Chi-square value: $\chi^2 = 17.45$
- p-value: < 0.001
- This indicates a highly significant association between preoperative counselling and reduced distress from visual phenomena.

3**. Confidence Interval and Effect Size**

•The mean difference in apprehension scores between the groups was statistically significant.

•The 95% confidence interval (CI) for this mean difference was (1.3, 2.4).

•This CI suggests a moderate to large effect size, confirming the substantial impact of preoperative information on reducing patient anxiety during surgery

Conclusions: The findings of this prospective audit underscore the critical role of preoperative information in managing patient anxiety related to intraoperative visual phenomena during topical cataract surgery. Statistical analysis revealed that patients who were informed in advance about potential visual experiences such as seeing lights, colours, or movements reported significantly lower levels of intraoperative anxiety compared to those who were not informed. This difference was found to be both clinically meaningful and statistically significant ($p < 0.01$), reinforcing the importance of comprehensive preoperative counselling. Given that topical cataract surgery is one of the most frequently performed procedures in ophthalmology, particularly among elderly individuals with multiple co-morbidities, ensuring patient psychological readiness is essential. Anxiety during surgery, more so under local anaesthesia, can lead to increased physiological stress, reduced cooperation, and potentially impact surgical outcomes or patient satisfaction. Based on these results, we propose a revision of current informed consent documents and preoperative counselling protocols to explicitly include detailed information about the potential for intraoperative visual phenomena. This should not only describe the types of visual sensations that may occur but also normalise these experiences to reduce the element of surprise or fear. **An enhanced cataract consent framework**—which incorporates both verbal counselling and written documentation about visual sensations—should be embraced as a core component of evidence-based, patient-centred surgical care. In conclusion, integrating this targeted educational intervention aligns with best practices in modern medicine, where patient empowerment and mental well-being are essential components of high-quality clinical outcomes.

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