



Anxiety in Cataract Patients, Benefits of Counseling on Patient Anxiety in Routine Cataract Surgery

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ABSTRACT

To quantify the anxiety provoked by cataract surgery and to assess which stage has caused maximum anxiety (preoperatively, operation day, postoperative day) and if counseling in the preoperative stage after admission helped in alleviating the fears of the patient. Ophthalmology Department at Datta Meghe Medical College, Shalinitai Meghe Hospital and Research Centre, Nagpur in collaboration with Jawaharlal Nehru Medical College, Datta Meghe Institute of Medical Sciences, Sawangi (Meghe) Wardha, Maharashtra. A cross-sectional analysis of patients having routine cataract surgery under local anaesthesia. The hospital anxiety and depression (HAD) scale was used to quantify the patient's anxiety. All patients were operated by manual small incision cataract surgery under peribulbar block. 50 patients (22 males and 28 females) were enrolled in the study. Patients were divided into two groups: patients getting operated for the first time (35 patients) and second time (15 patients). The Highest anxiety in both the groups was found on the preoperative group before counseling. Females were found to be more anxious than in males though not statistically significant. Preoperative anxiety was significantly more in patients getting operated for the first time than in patients getting operated for the second eye ($p=0.06$). Post-operative anxiety in second eye patients was significantly more than in first eye patients ($p=0.0003$).



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INTRODUCTION

Cataract is the leading cause of reversible blindness in the developing countries. Cataract is more often a cause of blindness in low-income nations, although cataract is also a leading cause of blindness in medically underserved areas of high-income nations (Brian and Taylor, 2001; Robin and Thulasiraj, 1960). In 1981, Venkataswamy and Brilliant found that more than 80% of blind patients in India referred for cataract surgery did not undergo surgery in a 2-year follow-up period due to economic or social barriers. (Venkataswamy and Bil-

liant, 1981) Although blinding cataract is most often left untreated because of a lack of access to quality surgical care, fear of surgery is also an important barrier to cataract treatment (Nirmalan, 2004).

The prospect of cataract surgery under local anaesthesia might be expected to provoke anxiety because of concerns over the prospect of the operation, fear of the procedure itself, and worries about the outcome. Anxiety and stress are associated with systemic problems such as tachycardia, hypertension, ophthalmic disorders that affect RNFL thickness and dysrhythmias due to sympathetic stimulation. (Panda *et al.*, 1996; Ramsay, 1972; Banait *et al.*, 2018) Increased preoperative anxiety has been correlated with increased postoperative pain, an increased analgesic requirement, and a prolonged hospital stay (Panda *et al.*, 1996; Badner *et al.*, 1990).

Surgery is a frightening event even when surgery is relatively minor. Thus, the aim of the presurgical counselling session is to alleviate surgical fears and psychological preparation for surgical interventions, to impart realistic understanding of the proposed surgery and prognosis, to make them aware of surgical procedure and postsurgical complications, and to orient the patient on operation theater environment.

Most of the time, the patients and family members or caregivers may not be aware of the illness and the surgical procedures. Thus, patients and their caregivers who are waiting for the surgical interventions experience a bundle of worries and tensions including distress, anxiety, depression, tendency to have postponing the surgery and uncooperative to surgery. Thus, this session is intended to alleviate the surgical fears, clarify concerns related to surgery, duration of surgery, role of anaesthesia, and to prepare the patients to adjust with post-surgical deficits. Studies also reported that providing preoperative information has positive effects and reduces postoperative stress, pain, and anxiety in surgical patients. (Shuldham, 1999a; Gammon and Mulholland, 1996; Wong *et al.*, 1990; Shuldham, 1999b).

MATERIALS AND METHODS

This cross-sectional, Observational study was carried out in Ophthalmology Department at Datta Meghe Medical College, Shalinitai Meghe Hospital and Research Centre, Nagpur, Maharashtra in collaboration with Jawaharlal Nehru Medical College, Datta Meghe Institute of Medical Sciences, Sawangi (Meghe) Wardha, Maharashtra.

50 Patients were invited to participate in the study. Their written informed consent was taken. Patients were stratified into patients who were undergoing cataract surgery for the first time and those whose 2nd eye was getting operated.

These groups were again sub-divided into 4 subgroups-

Group I- Assessment stage after ocular assessment and biometrics (in OPD)

Group II- Pre-operative day after counseling (after admission)

Group III- On the day of surgery.

Group IV- Post-operative day (next day after surgery).

Patients were provided Hospital Anxiety and Depression scale (HAD questionnaire) (Shuldham, 1999b) at 4 treatment stages-

The first questionnaire was given in the ophthalmology outpatient department (OPD) after the ocular examination which included visual acuity, refraction, slit lamp examination, intraocular pressure, dilated fundus evaluation and biometrics of the eye. The patient was then given a date for admission (7 days after the assessment in OPD). The second questionnaire was provided to the patient on the day of admission after a detailed counseling by an ophthalmologist. The third questionnaire was given on the day of surgery. Manual small incision cataract surgery (SICS) was performed in all patients under peribulbar anaesthesia. The last questionnaire was given on the post-operative day (next day of cataract surgery). The patients were first asked to complete the HAD scale for anxiety, which assessed how they had been feeling over the past week. Patients were asked to read a statement (e.g. "I can sit at ease and feel relaxed") and underline the most appropriate of the following responses: definitely, usually, not often, or not at all. The responses were scored as 0, 1, 2, and 3, respectively. The interviewer read the questionnaire to patients who could not read it because of the cataract or because they had received dilating eye-drops, the interviewer also translated the questionnaire in the language understandable to the patient (in the local language) (on the day ward).

The anxiety points for each question of the HAD scale were summed, giving an overall anxiety score. The HAD scale comprises 7 questions; thus, anxiety scores were out of 21. A HAD score of 0 to 7 indicated no anxiety; 8 to 10, doubtful cases; and 11 to 21, definite anxiety (Shuldham, 1999b). The HAD scale for anxiety was compared in all the four stages of treatment in the group getting operated for the first time as well as in the group getting operated for

the second time. The HAD scale was also compared between the two groups (first eye and second eye patients). HAD scale for anxiety was also compared between men and women.

Patients getting operated for the first time had a greater anxiety in the pre-operative stage and on the day of operation than the patients getting operated for the second time. This was not statistically significant.

Post-operative anxiety was found more in second eye group compared to 1st eye group which was statistically significant p value was found to be 0.0003.

Overall anxiety was more in females (mean 3.81) than in males (mean 3.59). p value was found to be 0.4312.

Inclusion criteria

1. Patients of either sex.
2. Patients undergoing routine cataract surgery

Exclusion criteria

1. Complicated cataract surgeries.
2. Traumatic cataract.
3. Glaucoma
4. Post vitrectomised eyes.

Statistical Analysis

All data was entered in an excel sheet in the form of master chart. Paired student t-test was performed. Null hypothesis was formed. P value lesser than 0.05 was considered statistically significant.

Results and Discussion

The mean age of patients was 64.38 with standard deviation 7.97. Total 50 patients (28 females and 22 males) were enrolled in the study. Patients getting operated for the first time were 35 and patients getting operated for the second time were 15. Overall anxiety in both groups was found to be 3.77 (S.D. 0.99).

Hospital Anxiety and Depression Scale (HADS) was originally developed by (Zigmond and Snaith, 1983) and is commonly used by doctors to determine the levels of anxiety and depression that a person is experiencing. The HADS is a fourteen-item scale that generates: Seven of the items relate to anxiety and seven relate to depression. We used only the items pertaining to anxiety in our study.

In our study according to the HAD scoring system for anxiety, it was observed that overall anxiety levels for the majority of patients preoperatively were low (average 3.77 ± 0.99) and further decreased post-operatively, which is consistent with prior reports (Foggitt, 2001).

In the first eye group, we observed that the patients had the highest anxiety on the day of assessment in the OPD (4.68 ± 0.79). The reduction in the HAD score of anxiety after patient admission and counseling (3.71 ± 0.71) was statistically significant ($p < 0.0001$, showed in Table 1). The patients served as their own controls to determine the role of counseling.

We believe that the preoperative assessment in the form of visual acuity, slit lamp examination, applanation tonometry and dilated examination increases the level of anxiety and fatigue in patients. The reduction in the anxiety after admission and counselling could also be because of good nursing care and calming atmosphere of the in-patient eye ward. Numerous studies report the benefits of counselling in surgical patients (Shuldham, 1999a; Gammon and Mulholland, 1996; Wong *et al.*, 1990; Shuldham, 1999b).

On the day of surgery, the patients again had an increase in anxiety (4.14 ± 0.601) (shown in Table 2) because of lack of awareness, which was significant as compared to the preoperative stages 'P' value 0.002.

It was observed that the preoperative written informed consent also aggravated the patients' fears and worries, thus balance between a proper consent which includes the risk of anaesthesia, surgery and proper counseling is extremely important in alleviating the patients' fears (Shuldham, 1999a).

The HAD scale of anxiety was significantly reduced in the post-operative stage (next day of cataract surgery) (2.54 ± 0.657) (shown in Table 3). The difference was statistically significant between both preoperative subgroup and operation day subgroups ($p < 0.0001$). This could be because of the relief felt after surgery as well as improved vision on the post-operative day. These findings agree with the study done by Foggitt (Foggitt, 2001).

Although not significant, in the second eye group, the overall anxiety was lower than that in the first eye group in the first 3 stages of treatment shown in Table 4. This could be because patients having cataract surgery for the first time do not have the benefit of experience, their greater anxiety preoperatively may be the result of uncertainty about what the operation involves and its success rate. These findings have been supported by findings of Foggitt and Nijkamp (Foggitt, 2001; Nijkamp *et al.*, 2002).

The anxiety scales were highest on the day of ocular assessment before admission (4.2 ± 0.86) shown in Table 5, which was statistically significant from anxiety score after counseling and admission (p value

Table 1: Comparison between HAD scales of anxiety in assessment stage preoperatively in the OPD and after admission after counseling

Stage of treatment	Had score for anxiety(Mean±SD)	p value
Assessment stage (in OPD)	4.68 ±0.79	<0.0001
Preoperative stage (post counselling)	3.71±0.71	

There is a significant improvement in the HAD scale of anxiety after counseling after admission(p<0.0001)

Table 2: Comparison of HAD scale of anxiety in assessment stage in OPD and after admission after counseling with anxiety on day of surgery

Stage of treatment	Had score for anxiety(Mean±SD)	p value
Preoperative day(post counselling)	3.71±0.71	0.008
Operation day	4.14±0.601	
Assessment stage (in OPD)	4.68 ±0.79	0.002
Operation day	4.14±0.601	

There is a significant increase in anxiety on the day of the surgery from preoperative stage of treatment(after counseling)(p=0.008) but the increase is still lesser compared to the anxiety in the OPD after ocular assessment(p=0.002).

Table 3: Comparison of HAD scale of anxiety on the day of surgery and post operative day(next day of surgery)

Stage of treatment	Had score for anxiety(Mean±SD)	p value
Operation day	4.14±0.601	<0.0001
Post operative day(next day of cataract surgery)	2.54±0.657	

There is a significant reduction in HAD scale of anxiety after the cataract surgery(p<0.0001).

Table 4: Comparison of HAD scales of anxiety in the preoperative stage before and after counseling

Stage of treatment	Had score for anxiety(Mean± SD)	P value
Assessment stage(in OPD)	4.2±0.86	0.02
Preoperative stage(after counselling)	3.53±0.63	

There is a significant improvement in anxiety preoperatively after counseling(p=0.002).

Table 5: Comparison of HAD scale of anxiety in preoperative stage before and after counseling with anxiety on day of surgery

Stage of treatment	Had score for anxiety(Mean± SD)	P value
Preoperative stage(after counselling)	3.53±0.63	0.16
Operation day	3.86±0.63	
Assessment stage(in OPD)	4.2±0.86	0.22
Operation day	3.86±0.63	

The anxiety levels increase on day of surgery but are not statistically significant as compared to preoperative levels, both after assessment in the OPD(p=0.16) and after counseling in the IPD(p value 0.22)

Table 6: Comparison of HAD scale of anxiety on the day of surgery and post-operative day (next day of surgery)

Stage of treatment	Had score for anxiety(Mean± SD)	P value
Operation day	3.86±0.63	0.0018
Postoperative(next day of cataract surgery)	3.13± 0.516	

There is a significant reduction in anxiety after the surgery as compared to the anxiety on the day of surgery (p value 0.0018)

Table 7: Comparison of HAD scales of anxiety between 1st eye group patients and 2nd eye group patients

Stage of treatment	First eye surgery	Second eye surgery	P values
Assessment stage (in OPD)	4.68 ±0.79	4.2±0.86	0.06
Preoperative stage(after counselling)	3.71±0.71	3.53±0.63	0.4
Operation day	4.14±0.601	3.86±0.63	0.14
Postoperative(next day of cataract surgery)	2.54±0.657	3.13± 0.516	0.0003

Post-operative anxiety was found more in second eye group compared to 1st eye group which was statistically significant p value was found to be 0.0003.

0.02). The rise in anxiety on the day of operation in second eye patients was not statistically significant.

Table 6 shows the rise in anxiety indicates that regardless of the patients getting operated for the first or second time, the hospital environment and prospect of surgery still evokes fear in the patient.

However, the post-operative anxiety was reported to be higher than in the first eye patients (Table 7). This was also found by Foggitt, and may be explained by the fact that not a single cataract surgery is performed in exactly the same way; so things are not always going as expected, which could increase feelings of fear and uncertainty of the surgical outcome. This finding has also been supported by Nijkamp in 2004 (Foggitt, 2001; Nijkamp *et al.*, 2002).

Morrell showed that structured preoperative teaching reduces anxiety in cataract patients, especially information regarding safety of cataract surgery (Morrell, 2001; Spina, 1984). Also, it was observed that females had a higher anxiety score than males because this study was conducted in a rural area and lack of awareness in females compare to male. This type of mentality was found in female patients, similar observations found to another researcher (Aglawe *et al.*, 2019). This difference was not statistically significant. This was in accordance with the study performed previously (Spina, 1984).

The same interviewer took up the verbal questionnaires of patients both in the OPD on the day of ocular assessment and after counseling in the in-patient eye ward. Thus, this could form a possible bias and is one of the shortcomings of this study. Further studies are required with double blind control to avoid this bias. Frailty in old age people in rural India could be one of the reasons for anxiety and also one of the causes of poor retention of information (Kumar *et al.*, 2019).

We believe that further studies are required in this subject with a larger population base as well as a double-blind randomized trial should be performed

to exclude the possibility of bias.

Conclusion

It was found that the average HAD scores of patients for cataract surgery was overall low but still counseling is an essential way of managing preoperative anxiety which has been proven in our study. Providing preparatory and adequate information on pre-operatively, postoperatively, and pre-discharge has many positive effects on patient's physical recovery, coping, attitude, anaesthesia reduction in anxiety and mood disturbances and allowing the patient and caregivers to prepare for the future.

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