

Study of anxiety symptoms in patients posted for cataract surgery

Nirmal Sankalp¹, Bansod Abhijeet², Faye Abhijeet³, Gawande Sushil⁴, Tadke Rahul⁵, Kirpekar Vivek⁶, Bhavne Sudhir⁷

Abstract:

Being posted for cataract surgery can be source of anxiety for the patient. This study was conducted to assess the presence of anxiety symptoms and their correlations with various socio-demographic variables in patients posted for cataract surgery. It was a cross-sectional, non-randomized, single interview study. 50 consecutive patients posted for cataract surgery were included. Each patient was individually interviewed using a semi-structured proforma prepared for the study which included socio-demographic profile, clinical and psychiatric profile and ophthalmological diagnosis. To assess various domains of anxiety, Hamilton Anxiety Rating Scale (HAM-A) was administered. About 80% of patients reported at least 2 or more anxiety symptoms but most of these symptoms were transient in nature. 92% had anxiety scores less than or equal to 13 on HAM-A. Only 14% patients reported worries on MSE. We did not found a diagnosable anxiety disorder in patients posted for cataract study. Only 8% of subjects had mild to moderate scores on Hamilton anxiety rating scale. Also the patients with mature cataract have statistically significant correlation with HAM-A scores.

Keywords: Anxiety, Cataract, Surgery.

^{1,2}Junior Resident, ³Lecturer, ^{4,5}Associate Professor, ⁶Professor, ⁷Professor & Head, Department of Psychiatry, NKP Salve Institute of Medical Sciences & Research Centre, Dighod hills, Hingna road, Nagpur-440019. abhijit_horizon@yahoo.com

Introduction

Anxiety is normal adaptive biological response to threat, associated with apprehension about an uncertain future, and a state of helplessness due to perceived inability to predict or control a desired outcome (1). Thus anxiety is a feeling of apprehension caused by anticipation of danger, which may be internal or external. One such anxiety provoking situation can be being posted for surgery. If the surgery is being performed on an organ as delicate as eye, the resulting anxiety can be overwhelming (2).

Cataract, being most common cause of blindness and conventionally being treated by surgery, accounts for most of the ophthalmic operations(3). Literature reveals that patients can experience anxiety preoperatively, intra-operatively, postoperatively(2,4-5). The various reasons for anxiety could be fear of blindness, premorbid personality traits, and inadequate knowledge about surgery. Various studies done in past decades show the significant anxiety symptoms are associated with these surgeries. Thus, this study was conducted to assess the presence of anxiety symptoms and their correlations with various socio-demographic variables in patients posted for cataract surgery.

Materials and Methods

It was a cross-sectional, non-randomized, single interview study carried out in a tertiary care hospital.

Study was conducted after taking permission from institutional ethics committee. 50 consecutive patients posted for cataract surgery and willing to be a part of study were included after obtaining written informed consent. This study aimed at studying anxiety symptoms in patients posted for cataract surgery and to correlate findings of socio-demographic profile and clinical profile with anxiety. Each patient was individually interviewed using a semi-structured proforma prepared for the study included socio-demographic profile, clinical and psychiatric profile and ophthalmological diagnosis. To assess various domains of anxiety, Hamilton Anxiety Rating Scale (HAM -A) was administered. HAM-A was one of the first rating scales developed to measure the severity of anxiety symptoms. The scale consists of 14 items, each defined by a series of symptoms, and measures both psychic anxiety (mental agitation and psychological distress) and somatic anxiety (physical complaints related to anxiety). Each item is scored on a scale of 0 (not present) to 4 (severe), with a total score range of 0–56, where 14-17 indicates mild severity, 18–24 mild to moderate severity and 25–30 moderate to severe (6). Data thus collected was tabulated and analyzed using non parametric tests under guidance of statistician to draw the conclusions.

Results:**Table 1: Socio-demographic profile**

Sr. No.	Demographic factor		Frequency N=50	Percentage (%)	
1.	Age group (years)	18-24	4	8%	Mean=42.48 S.D.=11.117
		25-34	6	12%	
		35-44	17	34%	
		45-54	17	34%	
		55-64	6	12%	
2.	Gender	Male	31	62%	
		Female	19	38%	
3.	Occupation	Unemployed	14	28%	
		Unskilled	10	20%	
		Semi-skilled	7	14%	
		Skilled	19	38%	
4.	Marital status	Unmarried	6	12%	
		Married	44	88%	

Age Distribution: Out of total study population, 68% of participants belong to age 35-54 years while 4% in 18-24 age group and 6% each in age groups of 25-34 and 55-64.

Gender Distribution: Out of total 50 participants, 31 were males and 19 were female.

Occupation: 38% of total study population was skilled workers followed by unemployed (28%), unskilled (20%) and semi-skilled (14%).

Marital status: Majority of patients i.e. 88% were married whereas 12% were unmarried (Table 1).

Table 2: Clinical Profile (Ophthalmic)

Sr. No.	Duration of complaints of diminution of vision	Frequency N=50	Percentage (%)
1.	Less than 6 months	9	18%
2.	6 to 12 months	28	56%
3.	More than 12 months	13	26%

Fifty six percent of the subjects had complaint of diminution of vision since between 6-12 months, 18% had complaints for less than 6 months whereas, and 26% had complaint for more than 12 months duration (Table 2).

Table 3: Past history of cataract surgery

Sr. No.	Past history of Surgery (Cataract)	Frequency N=50	Percentage (%)
1.	Absent	45	90
2.	Present	5	10

5 patients have past history of cataract surgery done (Table3).

Table 4: History of substance use

Sr. No.	History of substance use (Alcohol and Tobacco)	Frequency N=50	Percentage (%)
1.	Absent	45	90
2.	Present	5	10

10% patients have history of substance use (Table 4).

Table 5: Anxiety symptoms distribution as per history

Sr. No.	Number of anxiety symptoms	Frequency (N= 50)	Percentage (%)
1.	0	10	20%
2.	2	11	22%
3.	3	9	18%
4.	4	10	20%
5.	5	10	20%

Predominant anxiety symptom reported by patients were palpitation (n=22), followed by numbness in the peripheries (n=21), chest discomfort (n=12), others common symptoms were headache, tingling, insomnia, pounding of heart. Out of all patients; 22% patients had total of 2 anxiety symptoms followed by 20% patients had total of 4 and 5 anxiety symptoms each and 18% patients had total of 3 anxiety symptoms. 20 % had no anxiety symptoms (Table 5).

Table 6: Mental State Examination

Sr. No.	Factor		Frequency N=50	Percentage (%)
1.	Mood	Euthymic	43	86.0%
		Anxious	7	14.0%
2.	Thought: worries	Absent	43	86.0%
		Present	7	14.0%

14% of patients reported anxious mood and worries in thought (Table 6).

Table 7: Ophthalmology diagnosis

Sr. No.	Diagnosis	Frequency N=50	Percentage (%)
1.	Developmental cataract	8	16%
2.	Posterior sub capsular cataract	22	44%
3.	Near mature cataract	13	26%
4.	Mature cataract	7	14%

Posterior sub capsular cataract was diagnosed in 44% of patients followed by developmental cataract (16%), near mature cataract (13%) and mature cataract (7%) (Table 7).

Mean total HAM-A score is 5.78 with S.D. of 4.339. Item wise split score shows that the item 1: Anxious had maximum Mean score 1.32 with S.D. 0.927. Other items were as follows, item 2: Tension (Mean= 0.6 with S.D. =2.296), items 3: Fears (Mean=0.1, S.D. =0.543), item 4 Insomnia: (Mean=0.58, S.D. =0.867), item 5: Intellectual (cognitive): (Mean=0.24, S.D. =0.792), item 6: Depressed mood (Mean=0.72, S.D. =1.212), item 7: Somatic (muscular): (Mean=0.64, S.D. =1.274), item 8: Somatic (sensory): (Mean=0.50, S.D. =1.339), item 9: Cardiovascular symptoms (Mean=0.46, S.D. =1.399), item 10: Respiratory symptoms (Mean=0.12, S.D. =1.421), item 12: Genitourinary (Mean=0.36, S.D. =1.652), item 13: Autonomic symptoms (Mean=0.02, S.D. =1.686), items 14 behavior at interview (Mean=0.12, S.D. =1.971).

Table 8: HAM-A severity distribution

Sr. No.	HAM-A Severity		Frequency N=50	Percentage (%)
1	0-13	No anxiety	46	92%
2	14-17	Mild anxiety	2	4%
3	18-24	Moderate anxiety	2	4%
4	25-30	Severe anxiety	0	0%
	Total		50	100.0%

On assessing the patients on HAM-A scale, majority (92%) has no significant anxiety whereas 4 % each has mild and moderate anxiety each respectively (Table 8).

Table 9: Correlation of socio-demographic and clinical profile with HAM-A scores

Sr. No.	Factors		N=50	Mean	S.D.	P value
1	Age	45 and below	27	6.04	4.911	0.45
		Above 45	23	5.48	3.642	
2	Gender	Male	31	4.84	2.888	0.09
		Female	19	7.32	5.774	
3	Occupation	Unemployed	14	5.43	3.631	0.69
		Employed	36	5.92	4.625	
4	Marital Status	Unmarried	6	4.5	2.168	0.21
		Married	44	5.95	4.544	
5	Duration of ophthalmic complaints	Less than and 12 months	37	5.08	2.773	0.19
		More than 12 months	13	7.77	6.93	
6	Past history of cataract surgery	Absent	45	5.87	4.516	0.57
		Present	5	5.00	2.345	
7	History of substance use	Absent	38	5.13	4.095	0.08
		Present	12	7.83	4.629	

On assessing there was no significant correlation between socio-demographic profiles, clinical profiles with HAM-A scale (Table 9).

Table 10: HAM-A scores: Groups according Ophthalmology diagnosis

Sr. no.	Ophthalmology Diagnosis	N	Mean	S.D.
1.	Developmental cataract	8	4.00	2.070
2.	Posterior sub capsular cataract	22	5.64	3.736
3.	Near mature cataract	13	5.00	2.550
4.	Mature cataract	7	9.71	7.952*

Table 11: ANOVA Test: HAM-A scores & Type of cataract

Sr. No.		Sum of Squares	Degree of freedom	Mean Square	F Value	P Value
1	Between Groups	17.090	10	1.709	2.699	0.013*
2	Within Groups	24.690	39	0.633		
	Total	41.780	49			

Thus there is statistically significant correlation between patients with mature cataract and HAM-A score (Table 10 and 11).

Discussion

Geriatric population is commonly diagnosed with mature cataract but this study includes patients diagnosed with developmental cataract, post sub capsular and near mature cataract. Thus, 68% of the study participants belonged to age group of 35 – 54 years. Sex distribution among study population was favorable towards males, showing social discrimination faced by women and also demonstrates the tendency of females to neglect their own health issues. Lewellens et al (7) in their study “to determine use of cataract surgical services”, found similar results.

Majority of participants i.e. 74% opted for surgical intervention within year of onset of symptoms, probably indicating greater awareness for the eye care. As most of study participants belonged to middle age i.e. (45-54 years), so history of previous cataract surgery was found only in 10 % of patients. Two or more anxiety symptom, irrespective of severity was reported by around 80% of patients. Most frequently reported symptom was palpitation. Anxious mood and pre-occupation with worries was reported by 14% only. About 44% had posterior sub capsular cataract with statistically significant correlation was noted in HAM-A scores with mature cataract. This can be attributed to severe visual morbidity associated with mature cataract. On HAM-A around 92 % of patients had anxiety scores less than or equal to 13, with remaining 4 % being mild and moderate anxiety scores each. Indicating an average patient were not unduly anxious about cataract surgery, sharing similar findings with Foggitt (2001) (4). These findings are in contrast, to previous studies like Dhaliwal et al (8) and Chaudhary et al (9) which reported presence of significant anxiety prior to cataract surgery. The reason for this difference can be attributed to increased awareness, increased success rate of these surgeries, reduced incidences of post-operative

complications. This can also points towards the success of various government policies under Vision 2020.

Conclusion

We did not found a diagnosable anxiety disorder in patients posted for cataract surgery in this study. Only 8% of the patients had mild to moderate scores on Hamilton anxiety rating scale. Also, the patients with mature cataract had significantly higher anxiety on Hamilton Anxiety Rating Scale.

Acknowledgement:

We would like to thank the Department of Ophthalmology, NKP Salve Institute of Medical Sciences & Research Centre, Nagpur for the support.

References:

- Shelly A, Holmer R, Tighe M. Diagnosis and treatment of anxiety in the intensive care unit patient, In: Irwin RS, Rippe, JM, Eds: Intensive Care Medicine, 6th ed. Philadelphia: Lippincott Williams & Wilkins 2008; 201: 2296.
- Fagerström R. Fear of a cataract operation in aged persons. Psychol Rep 1993; 72:1339–46.
- Taylor H. Cataract: How much surgery do we have to do? Br J Ophthalmology 2000; 84(1):1–2.
- Foggitt PS. Anxiety in cataract surgery: pilot study. J Cataract Refract Surg 2001; 27:1651–5.
- Nijkamp MD, Ruiters RAC, Roeling M. Factors related to fear in patients undergoing cataract surgery: A qualitative study focusing factors associated with the fear and reassurance among patients who need to undergo cataract surgery. Patient Education & Counseling 2002; 47:265–72.
- Hamilton M. The assessment of anxiety states by rating. Br J Med Psychol 1959; 32:50–55.
- Lewallen S, Courtright P. Gender and use of cataract surgical services in developing countries. Bull World Health Organ 2002; 80:300–3.
- Dhaliwal U, Gupta SK. Barriers to the uptake of cataract surgery in patients presenting to a hospital. Indian J Ophthalmology 2007; 55:133-6.

9. Chaudhary S, Chakraborty PK, Gurunanadh VS, Ratha P. Psychological reactions to cataract surgery with intraocular lens implantation. *Indian Journal of Psychiatry* 1995; 37(40): 165-8.