

Assessment of Anxiety and Depression in Primary Open Angle Glaucoma Patients (A Study of 100 Cases)

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Purpose: The purpose of our study was assessment of anxiety and depression in primary open angle glaucoma patients.

Materials and Method: This study was conducted in the Department of Ophthalmology Abbasi Shaheed Hospital from May 2006 to August 2007 in collaboration with Psychiatry Department. Patients who had undergone thorough investigation and examination and diagnosed as patients of primary open angle glaucoma were selected randomly from the glaucoma clinic. These patients were evaluated through Hospital Anxiety and Depression scoring method. It has been translated in Urdu language for better understanding of patients and was filled by the patients themselves.

Results: One hundred patients of primary open angle glaucoma were included in our study, 76% percent were male and 24% were female. The average age was 56.21 ± 13.37 years. Anxiety in POAG patients was observed in 33% cases and depression was observed in 24% cases. It is quite obvious that levels of anxiety were high among the patients of primary open angle glaucoma.

Conclusion: Large majority of patients with physical disorders including glaucoma suffers from hidden psychiatric disorders that often go undetected. Depression and anxiety constitute greater percentage of this combined psychiatric disorder in physically ill patients. Moreover prevalence of anxiety is more in patients of primary open angle glaucoma as compared to depression.

Glaucoma is a heterogeneous group of conditions involving cupping and atrophy of optic nerve head, characteristic visual field loss and often but not invariably a raised intraocular pressure¹.

Glaucoma is the third largest cause of blindness world wide after cataract and trachoma. WHO estimated that about 105 million people suffer from glaucoma around the world and an estimated 5.2 million are blind from it. It was also found that 24% of the sufferers of primary open angle glaucoma were blind in at least one eye².

This may be because there is no cost effective and reliable method of detecting and treating the disease in large populations. The burden of blindness from

different types of glaucoma is high. Therefore making the diagnosis of a disease such as glaucoma that can lead to blindness may have an emotional impact on the patient. Just as psychological stress can translate into illness that warrants treatment, likewise some physical illnesses also create psychological sequel that precipitate psychiatric disorder severe enough to require specialist treatment³.

On the other hand a large majority of patients with physical disorders including glaucoma suffer from hidden psychiatric disorders that are often undetected by their attending primary care physician⁴.

Depression and anxiety constitute greater percentage of these combined psychiatric disorders in physically ill patients⁵.

The role of emotional factors in glaucoma has received wide recognition by investigators and clinicians. Demours as early as 1818 commented on psychic influences that may play a predominant role in glaucoma⁶. Later workers such as Miller, Piers, Ripley and Wolf and others added further clinical and experimental elaboration of this concept and Berger has reviewed the literature in this aspect⁷⁻¹⁰.

Glaucoma probably more than any other eye disease has been considered to be a psychosomatic disorder¹¹. This fact has often been overlooked that eye conditions generally are likely to involve psychological factors. Schlager and Hoyt cited the opinions of several ophthalmologists with regard to the percentage of eye cases involving emotional difficulties. They reported percentages range from 40-100 indicating the prevalence of psychological factors in eye diseases in opinion of leading ophthalmologists¹¹. Miller, Piers, Ripley and Wolf have described specific personality features in glaucoma as compulsive traits, over meticulousness, over consciousness and perfectionism⁶⁻⁸. Others have commented on moody, anxious and hypochondriac trends in these patients. These findings are quite valuable to establish the fact that glaucoma may be a psychosomatic disease. These patients are usually evaluated on Hospital Anxiety and Depression scale. Zigmond and Snaith (1983) developed HAD scale specifically for use with physically ill patients. It is a brief instrument containing seven items each for anxiety and depression which are rated on 4 point scale. Somatic items are excluded and concept of depression is based on anhedonic state reflecting loss of pleasure. This scale is considered to be the best indicator of biogenic or drug responsive depression. A clinical diagnosis anxiety or depression is likely if total score of 11 or over is obtained on one of the two subscales. A score of 8-10 is considered borderline and a score of 7 or less is normal¹².

MATERIALS AND METHODS

Subjects for the study were recruited from among the patients attending the glaucoma clinic at Eye department Abbasi Shaheed Hospital from May 2005-August 2006.

All participants underwent comprehensive ophthalmological examination. Best corrected visual acuity was measured for each eye. Intraocular pressure was measured with Goldman applanation tonometer. Gonioscopy was done to assess the status of angle of anterior chamber. Visual fields were

evaluated on Octopus 301 perimeter. Only the patients with reliable visual fields were included in the study. Each participant had a complete fundus examination to rule out additional ocular abnormalities. Anxiety and depression were measured using HAD scale for anxiety and depression. The patients were evaluated through HAD scoring for anxiety and depression. It has been translated in Urdu for better understanding of the questions asked¹³. The patients were asked to fill the proforma themselves and select the first quick response on the questionnaire Anxiety and depression were evaluated according to the parameters of HAD scale.

Demographic characteristics consisting age, gender, marital status, level of education, quality of life and occupation were obtained from patients using a separate data collection sheet.

RESULTS

A total of 100 patients of primary open angle glaucoma were included in our study. 76% patients were male and 24% patients were female (fig. 1). Most commonly presenting age group was between 51-70 years followed by above 70 years of age as shown in figure 2. The average age of the patients was 56.21±13.37 years (95%CI: 53.56 to 58.86). Similarly average HAD scored for anxiety and depression are also presented in (Table 1).

Table 1: Statistics of study variables

Study Variables	Mean (SD)	95%CI	Minimum-Maximum observation
Age (Years)	56.21(13.37)	53.56 to 58.86	16 - 85
HAD Scoring Anxiety	9.01(4.11)	8.20 to 9.82	1 - 21
HAD Scoring Depression	7.62(4.64)	6.70 to 8.54	0 - 20

Anxiety and depression was evaluated by using questionnaire according to HAD scale. HAD score greater than and equal to 11 was observed in 33% cases which shows anxiety in POAG patients, borderline cases of anxiety were observed in 21% (HAD score 8 to 10) and 46% were normal which HAD score ≤ 7. Similarly clinically diagnosed (HAD score ≥ 11) cases of depression were 24%, borderline cases (HAD score 8 to 10) were 29% and patients with normal HAD scoring were 47% as shown in figure 3.

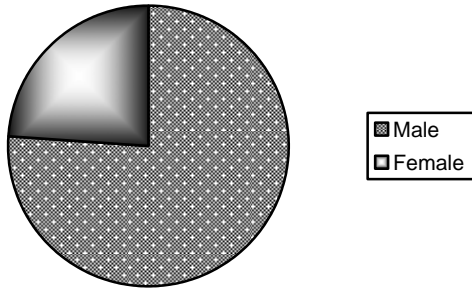


Fig. 1: Gender Distribution of patients with primary open angle glaucoma

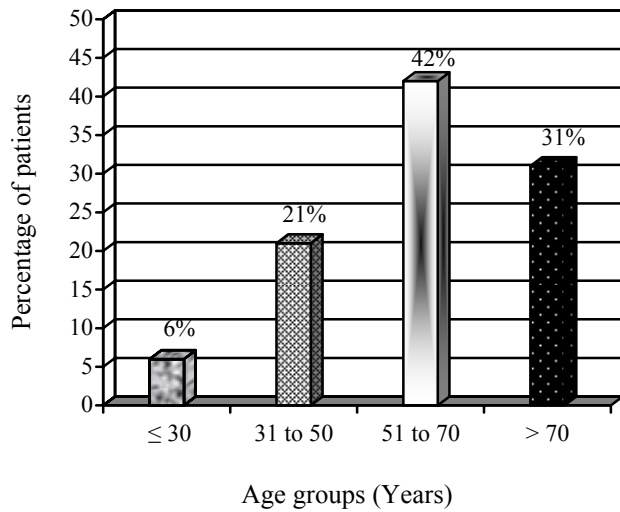


Fig. 2: Age Distribution patients with primary open angle glaucoma

It is quite obvious that levels of anxiety are high while levels of depression low among the patients of primary open angle glaucoma.

DISCUSSION

Long term treatment of primary open angle glaucoma could be stressful for patients apart from frequent and multiple hospital visits, cost of drugs transportation and other expenses source of anxiety and depression. It is quite obvious that levels of Anxiety (36%) are high as compared to levels of depression (30%).

As primary open angle glaucoma is a disease which can potentially result in bilateral blindness. Patients may have been anxious about losing their job and becoming unable to earn their living due to loss of visual functions. Hamelin et al described that glaucoma patients showed either an anxious or

passive reaction to the announcement of diagnosis of glaucoma¹⁴.

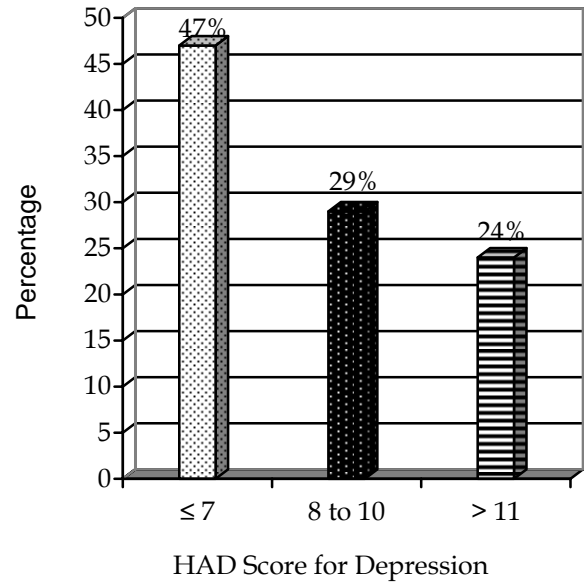
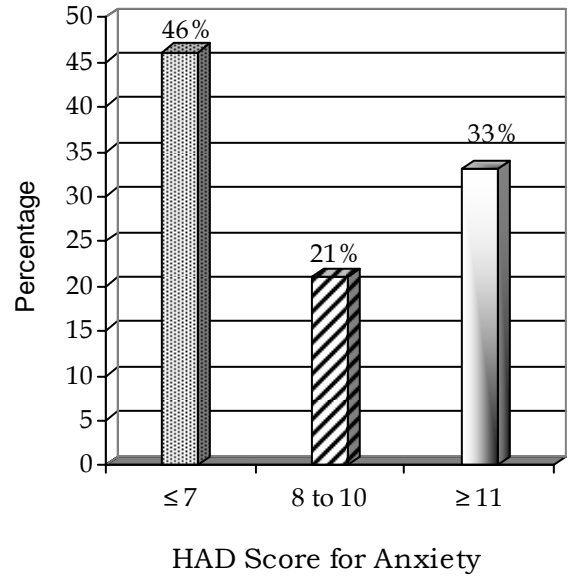


Fig. 3: Assessment of Hospital Anxiety and Depression scoring of primary open angle glaucoma patients

In regard to anxiety Demially et al reported that anxious personality traits and anxiety disorders were more prevalent in patients of severe primary open angle glaucoma¹⁵. Compared to that of depression that was 10.9%¹⁶.

Another study carried out in University of Benin teaching hospital Benin City Nigeria showed prevalence of anxiety 10% and that of depression 6% in patients of primary open angle glaucoma¹⁷. This study shows that prevalence of anxiety is higher than that of depression in patients of primary open angle glaucoma similar to our study. Erb et al in their study of psychiatric manifestations in patients with primary open angle glaucoma, noted that while glaucoma patients had higher scores on depression than their outpatient counterparts and the cataract control group, the outpatient glaucoma group had statistically significant higher score for psychosomatic complaints. The score on all three parameters (depression, psychosomatic complaints, and emotional stability) were normal for the cataract patients¹⁸.

Another study conducted in Greece showed that anxiety and depression levels were significantly higher in patients of primary open angle glaucoma than those in healthy controls. Anxiety and depression scores in patients with glaucoma did not differ significantly from the scores in patients with coronary disease¹⁹.

Cumurucu et al reported that there was no significant difference between anxiety levels of POAG and control groups but it was found that anxiety was more prevalent in POAG group²⁰.

A study conducted in Korea also demonstrates that degree of anxiety and depression was significantly higher in glaucoma patients group. A psychological self training in daily life in addition to medical and surgical treatment can help to reduce anxiety and depression²¹.

The trend of varying psychopathologic findings in glaucoma patients could well be the result of perceived helplessness and hopelessness among these patients suffering from an "incurable" visual problem; the initial anxiety being the result of efforts to find a final cure to a threatening visual loss after previous disappointing remedies. There is therefore a need to explore the emotional state of glaucoma patients in order to help improve their quality of life.

CONCLUSIONS

It was concluded from the study that patients of primary open angle glaucoma do suffer from hidden psychiatric disorders that are often undetected by their attending primary care physician. Among these disorders anxiety and depression are more common.

Our study shows that prevalence of anxiety is higher than that of depression in patients of primary open angle glaucoma. It is therefore suggested that in addition to evaluation and treatment of glaucoma these patients should also undergo thorough psychological assessment to reveal their psychological disorders, which should then be properly addressed.

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