Singgih Pratama, Arief Wildan,
Riski Prihatningtias, Fifin Luthfia Rahmi

CORRELATIONS BETWEEN SUCCESSFUL THERAPY AND ANXIETY LEVEL OF POST OPERATIVE GLAUCOMA PATIENTS

Singgih Pratama[1], Arief Wildan[2], Riski Prihatningtias[2], Fifin Luthfia Rahmi[2],
[1] Undergraduate Student, Faculty of Medicine, Diponegoro University, Semarang
[2] Lecturer, Department of Ophthalmology, Faculty of Medicine, Diponegoro University, Semarang

ABSTRACT

Background : Glaucoma is a disease that can cause damage to the optic nerve. High intraocular pressure is a major risk factor for glaucoma. The main goal of treating glaucoma is to control the disease progression by reducing intraocular pressure to the normal range or in accordance with the target pressure, and unsuccessful treatment can lead to anxiety. **Aims** : Identifying the correlation between therapeutic success and anxiety levels in post-operative glaucoma patients. **Methods** : This research used observational analytic method with a cross-sectional design. A total of 34 post-operative glaucoma patients were collected by consecutive sampling at the Eye Outpatient Installation of Dr. Kariadi Hospital Semarang. The anxiety level was assessed using the *Taylor Manifest Anxiety Scale* (TMAS) questionnaire. Data analysis in the study used the *Contingency Coefficient* test. **Results** : A total of 34 glaucoma patients consisted of 17 patients who successfully achieved the target pressure and 17 patients who failed to achieve the target pressure. There was a significant correlation between the success of glaucoma therapy with anxiety levels ($p = 0.008$) and there was a weak relationship between the two variables ($r = 0.471$). **Conclusion** : There is a correlation between therapeutic success and anxiety levels in post-operative glaucoma patients.
Keywords : Glaucoma, anxiety, *Target pressure,* Intraocular Pressure (IOP)

INTRODUCTION

Glaucoma is the second leading cause of blindness in the world after cataracts. In 2013, the prevalence of blindness in Indonesia at the age of 55-64 years old was 1.1%, 65-74 years old was 3.5% and 75 years old and above was 8.4%.[1]

Glaucoma is a disease that can cause damage to the optic nerve. Damage to the optic nerve will cause partial or whole interference in the visual field, where high intraocular pressure (IOP) is a major risk factor for glaucoma. In general, it is caused by the obstruction in the excretion of eyeball liquid.[2]

For people with glaucoma, vision loss itself is considered a problem. The loss of visual field, both unilateral and bilateral, can lead to a decrease in productivity and independence. Besides that, blindness.[3] Therefore, in this study, the authors would like to identify, compare, and analyze the correlation between therapeutic successes and anxiety levels in post-operative glaucoma patients.

METHODS

This research was an observational analytic study with a cross sectional study design. This research was conducted at the Eye Clinic of Kariadi General Hospital Semarang in August-October 2019. The subjects were 3 months post-operative glaucoma patients who were treated at the Eye Clinic of RSUP Dr. Kariadi Semarang and fulfilled the criteria of 3 months post-trabeculectomy glaucoma patients aged 30-80 years old. Research subjects who have a history of other serious illnesses such as depression, psychosis, taking anti-anxiety drugs and refusing to participate were not included in the study.

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Based on the calculation, the sample size needed for this study were 17 patients who successfully achieved the target pressure and 17 patients who failed to reach the target pressure. The independent variable of this study was the therapeutic success of glaucoma patients. The dependent variable of the study was the anxiety level of glaucoma patients, which was obtained from the evaluation results using the Taylor Manifest Anxiety Scale (TMAS) questionnaire.

The data obtained were processed using a computer program and check the completeness and correctness before being analyzed. Then, a correlation test was conducted to see the correlation between therapeutic successes and anxiety levels using the *Contingency Coefficient* test.

RESULTS

Patient data regarding the age, sex, type of glaucoma, the eye/eyes suffering from glaucoma, therapeutic success and anxiety level was obtained.

Table 1. Basic Characteristics of Research Subjects

Variable	Frequency	Percentage (%)
Age		
> 60 years old	8	23,5
< 60 years old	26	76,5
Sex		
Male	12	35,3
Female	22	64,7
Types of Glaucoma		
Open-Angle Glaucoma	14	41.2
Angle-Closure Glaucoma	19	55,9
Secondary Glaucoma	1	2,9
Eye(s) with Glaucoma		
Right	10	29,4
Left	10	29,4
Right-Left	14	41,2
Therapeutic Success		
Successful	17	50
Failed	17	50
Anxiety Levels		
Severe	5	14.7
Moderate	13	38.2
Mild/Not Anxious	16	47.1

Most respondents aged less than 60 years, consisting of 26 people (76.5%). Then, most respondents were female, consisting of 22 people (64.7%). The most type of glaucoma suffered by the respondents was angle-closure glaucoma, consisting of 19 respondents (55.9%). The most eyes with glaucoma were the two eyes, totaling 14 people (41.2%). Then, the most level of anxiety in the respondents was mild anxiety, with 16 people (47.1%).

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Table 2. Anxiety Levels in Glaucoma Patients Based on Therapeutic Success

		Anxiety Level			Total
		Mild	**Moderate**	**Severe**	
Therapeutic	Successful	12 (70.6%)	5 (29.4%)	0	100%
Success	Failed	4 (23.5%)	8 (47.1%)	5 (29.4%)	100%

Most respondents who managed to achieve the therapeutic target, had a mild anxiety level with a number of 12 people (70.6%), while most respondents who failed to achieve the therapeutic target had a moderate anxiety level with a number of 8 people (47.1%).

The *Contingency Coefficient* Test was used to identify the correlation between the degree of severity of glaucoma and anxiety levels.

Table 3. Correlation between glaucoma therapeutic success and anxiety levels

		Anxiety Level
Therapeutic	**Significant (P)**	0.008
Success	**Correlation Coefficient (r)**	0.471

Annotation: Significant (p<0.05); Correlation (strong: r>0.5 ; weak: r<0.5)

The *Contingency Coefficient* test results obtained a value of $p < 0.05$, which means significant data, and the results obtained as $r < 0.5$ which means that there was a weak correlation between the two variables.

DISCUSSION

The results of the descriptive analysis found that the type of glaucoma that most respondents suffered was angle-closure glaucoma with 19 (55.9%) respondents. In the age characteristics, glaucoma sufferers often occur in the 30-60 years old age group. There were 22 (64.7%) female patients and 12 (35.3%) male patients, which showed that there were more female patients than male patients. This is similar to research conducted by Wayan et al., that surgical-related anxiety is more often experienced by women, and that female gender is a risk factor of anxiety in adults. Females are easier in showing the anxiety they experience compared to males.[4]

The assessment results of anxiety levels of all respondents in this study showed that the most anxiety levels were mild anxiety level (47.1%), followed by moderate anxiety level (38.2%) and severe anxiety level (14.7%). This result is similar to the study conducted by Nuraeni et al., which stated that out of 56% respondents who experienced anxiety, 8% of them experienced severe anxiety, and 48% experienced mild-moderate anxiety.[5]

In this study, as many as 13 (76.5%) respondents who failed to achieve the therapeutic target experienced moderate-severe anxiety, the glaucoma patients felt like he/she was a burden on the family because he had to lose his job and had to seek lifelong treatment. This is similar to the theory of behavior which states that anxiety is the result of frustration due to various things that affect the individual in achieving the desired goals, such as a patient who wants to recover from his/her illness but resulted not in accordance with what is desired, will trigger anxiety.[6] However, not

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all respondents feel that way, due to the presence of family support.

As many as 12 (70.6%) respondents who successfully achieved the therapeutic target experienced mild anxiety levels, where the patient knew that his/her vision will not worsen if the IOP was normal, but there were patients who still felt anxious and anxious because IOP was still unstable. When experiencing anxiety, the body's system will increase the sympathetic nervous system, causing changes in the bodily response.[7]

CONCLUSION

Based on the data analysis result of this conducted research, it can be concluded that there is a significant relationship between therapeutic success and anxiety levels in post-operative glaucoma patients.

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