

Factors Influencing the Occurrence of Cataracts In Hospital

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Abstract: This study aimed to determine the factors that influence the occurrence of cataracts in the Sheikh Yusuf Hospital, Gowa Regency. The research design used was analytic with a Cross-Sectional Study approach. The study results were obtained using the Observation sheet with a sample of 55 respondents. After conducting research, sampling is done by accidental sampling, and then the data is processed using computer software. The results of the bivariate analysis showed that there was an effect of age on the incidence of cataracts by regression test with t-test obtained a Significant value of $0.001 < 0.05$ and Occupational Effect on the incidence of cataracts with t-test obtained a Significant value of $0.000 < 0.05$ this study concludes that there is an effect of age on the incidence of cataracts. Cataracts and there is an effect of work on the incidence of cataracts in the Sheikh Yusuf Hospital, Gowa Regency. It is recommended that the hospital be able to provide information to patients to increase patient knowledge about cataracts and cataract surgery.

Keyword: Age, Occupation, Cataracts

INTRODUCTION

A cataract is a condition with a clouding of the lens fibers or material in the capsule. A cataract is a pathological condition of the lens where the lens becomes cloudy due to the hydration of lens fluid or denaturation of lens proteins. This clouding occurs due to disturbances in normal lens metabolism, which can occur at various ages. Cataracts can occur when the development of lens fibers stops in their development, and the degeneration process has begun (1,2). Blindness due to cataracts or clouding of the eye lens is a global health problem that must be addressed immediately. It can reduce the quality of human resources and productivity and requires quite significant treatment costs (3).

World Health Organization (2021) estimates that the cause of most visual impairments worldwide is uncorrected refractive errors, followed by cataracts and glaucoma. There are at least 135 million people who have very significant visual impairments, and there are more than 50 million blind people in the whole world today. The most common cause of blindness is cataracts (51%), followed by glaucoma and age-related Macular Degeneration (AMD). The cause for 21% cannot be determined, and 4% have had vision problems since childhood (4).

The most common type of cataract is the senile cataract. Research conducted at Medical College Hospital in India revealed that of 746 patients, 53.6% had cataracts. Most of the patients (55%) had mild cataracts aged 60-80, and 53.8% of the cataracts were of the early cataract type (5).

The Indonesian Ministry of Public Relations and Public Relations through the Republic of Indonesia Ministry of Defense, since 2000, together with WHO, have launched Vision 2020, namely, The Right to Sight. In the 2020 vision, the right to sight is a program initiated by WHO and the International Agency for the Prevention of Blindness (LAPB) to achieve optimal vision function worldwide. Indonesia, as the country

with the third highest number of childbirths in Indonesia, has yet to commit to efforts to eradicate childbirth (6).

It is estimated that every year new cases of cataract bulbs will always increase by 0.1% of the number of instances or approximately 250,000 people/year. Meanwhile, the ability to carry out cataract surgery every year is estimated to have reached 180,000/year until there has always been an increase in the cataract backlog of around 70,000. If we don't continue to overcome this backlog of cataracts, the number of congenital disabilities in Indonesia will continue to get higher and higher (7).

Indonesia, as a developing country, experiences many eye health problems. The estimated incidence of cataracts is 0.1% annually or annually. Among 1,000 people, there is a new onset of cataracts. Indonesian residents also have a faster rate of developing cataracts at 15 years old than residents in tropical regions; around 16 - 22% of cataracts undergoing surgery are under 55 years old. The prevalence of cataracts in Indonesia, according to the results of the examination by the Head of the Department of Internal Affairs in Riskelsdas 2013, was the highest at 1.8%, the highest in North Sulawesi Province (3.7%) and the lowest in DKI Jakarta (0.9%) (8).

South Sulawesi is in the 4th rank with the number of sufferers (2.5%), and there are still many cataract sufferers who have not yet discovered that they suffer from cataracts. This occurs at the age of 40-50; agricultural work also has a significant risk of developing cataracts, namely farmers and fishermen. And laborers in Gowa district at the beginning of 2018, the Gowa District Government (Pemkab) Gowa recorded that at least the number of people suffering from cataracts had reached 750 people or 0.1 of the total population in 2018. Based on the figures above, the author is very interested in finding out the factors that Help to cause cataracts.

METHODS

The research design used is analytical with cross-sectional study enhancement. The research results were obtained using an observation sheet with a sample size of 55 respondents. Sampling uses an accelerated method of sampling based on the fact that it can also involve people who are comfortable with the research and who are known. The instrument used in this research is the educational sheet, a list of questions aimed at exploring the knowledge of people who suffer from osteoarthritis. Seltellah researches the accuracy of the data processed by using computer software by SPSS Versi 26.

RESULT AND DISCUSSION

Result

Respondent Characteristic

Table 1. Respondent Characteristic

Age	Frekuensi (f)	Presentase (%)
Adult	26	47.03.00
elderly	29	52.07.00
Job		
in room	33	60
out room	22	40

Type		
Konginetal	3	5,5
senilis	35	63,6
juvenil	17	30,9

Source : Data Primary, Year 2023

Table 1. The distribution of the frequency of seniors in the Syekh Yusuf Hospital in the adult category was 26 (47.3%) respondents, and in the Elderly category, 29 (52.7%). It can be said that the age of the respondents in the Syekh Yusuf Hospital is in the Elderly category. Frequency distribution of work in categories within the loop, 33 (60%) of them are in the loop, of which there are 22 (40%) categories of work in the loop; it can be said that the work at Syekh Yusuf Regional Hospital is in the category of categories in the loop. Frequency distribution of cataract types in Syekh Yusuf Regional Hospital in Congenital category 3 (5.5%) respondents, which has the Senilis category 35 (63.6%) respondents. And those with the Juvenile category were 17 (30.9%) respondents. It can be said that the type of cataract in the RSUD Syekh Yusuf category is Senilis.

Analysis Bivariate

Table 2. *The Influence of Age on the Occurrence of Cataracts at Syekh Yusuf Regional Hospital, Gowa Regency*

		Age				Total	Sig.
		Adult		Elderly			
		N	(%)	N	(%)		
Cataracts	Kongenital	2	(3.6%)	1	(1.8%)	3 (5.5%)	0.001
	Senilis	16	(29.1%)	19	(34.5%)	35(63.6%)	
	Juvenil	8	(14.5%)	9	(16.4%)	17(30.9%)	
Total		26	(47.3%)	29	(52.7%)	55 (100%)	

Source : Data Primary, Year 2023

The Sig-value can be seen as 0.001 based on the correlation test table, because of value. Sig. 0.001 < 0.05, then it can be concluded that H_a was received, meaning that there was an ulcer effect on the occurrence of cataracts at Syekh Yusuf General Hospital.

Table 2. The influence of work on the incidence of cataracts at Syekh Yusuf Regional Hospital, Gowa Regency

		Job				Total	Sig
		In room		Out room			
		N	(%)	N	(%)		
Cataracts	Kongenital	1	(1,8%)	2	(3.6%)	3 (5.5%)	0.000
	Senilis	20	(36.4%)	15	(27.3%)	35(63.6%)	
	Juvenil	12	(21.8%)	5	(9.1%)	17(30.9%)	
Total		33	(60%)	22	(40%)	55 (100%)	

Based on the correlation test table, the Sig value can be seen. selbelsar 0,000 because of value. Sig. 0.000 < 0.05, then it can be concluded that Ha was received, meaning that there was an influence on the occurrence of cataracts at Syekh Yusuf Hospital.

Discussion

The Influence of Work on the Occurrence of Cataracts at Syekh Yusuf Regional Hospital, Gowa Regency

Based on the results of the research that has been carried out, it was found that there were 33 respondents (80%) who were involved in repeated work with cataracts, while there were 22 people (20%) who were involved in repeated work with the occurrence of cataracts. After an analysis was carried out using the correlation test, a sig value of 0.000 was obtained, meaning that there was an influence on the incidence of cataracts at Syekh Yusuf General Hospital. In this case, the work is due to exposure to ultraviolet rays, where UV rays are a risk factor for cataracts. Ultraviolet rays originating from the sun will be absorbed by lens protein (9- 11). They will then cause a photochemical reaction in the cell so that it becomes free radicals or oxygen spells, which are very relativity. Relaxation of the lens will affect the protein structure of the lens, which in turn causes damage to the lens in the cataract cell (12-13).

The research assumption is that the work, in this case, is due to exposure to ultraviolet rays, where UV rays are a risk factor for cataracts. Ultraviolet rays originating from the sun will be absorbed by lens protein. They will then cause a photochemical reaction in the cell so that it becomes free radicals or oxygen spells, which are very relativity. Relaxation of the lens will affect the protein structure of the lens, which in turn causes damage to the lens in the cataract cell. In the Sulatul study, they reported a positive correlation between workers exposed to sunlight and the occurrence of cataracts and The research assumption is that the work in this case is due to exposure to ultraviolet rays, where UV rays are a risk factor for cataracts. Ultraviolet rays originating from the sun will be absorbed by lens protein. They will then cause a photochemical reaction in the cell so that it becomes free radicals or oxygen-oxygen spells, spells which are very relativity. Relaxation of the lens will affect the protein structure of the lens, which in turn causes damage to the lens in the cataract cell.

CONCLUSION

The impact of more excellent work on the incidence of cataracts at Syekh Yusuf Regional Hospital was 29.4%. This is because they consider it easy to do repetitive outdoor activities without wearing sunglasses. Melrelka only wears a jacket when she's out at home. Besides that, most of the population also use personal protective equipment such as white-colored safety glasses, which are also anti-ULV. The main

protein, the aromatic amino acid, absorbs ultraviolet rays from the sun. Because ultraviolet rays from the sun can accelerate wear and tear on the eye's lens, people frequently exposed to ultraviolet rays during their daily activities increase the risk for cataracts. The effects of prolonged exposure to sunlight over a long period will cause the eye's lens to dry out; this can cause cataracts.

ACKNOWLEDGMENT

We thank the Syekh Yusuf Gowa Regional General Hospital, the patient's family, and everyone involved in this research.

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