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Original Research

Determination of risk factors of cataract in known population

Virender Singh Chauhan

Professor, Department of Ophthalmology, TSM Medical College, Lucknow, Uttar Pradesh, India

ABSTRACT

Background: Cataract is one of the most common causes of visual impairment in the world. The present study was conducted to assess risk factors of cataract in known population. **Materials & Methods:** 60 patients of cataract of both genders were selected. Lens opacity was graded according to the Lens Opacity Classification System III (LOCS III). Risk factors were recorded. **Results:** Out of 60 patients, males were 38 and females were 22. Common risk factors of cataract were low SES in 45, positive family history in 35, age >50 years in 51, diabetes in 34 and hypertension in 50. **Conclusion:** Cataract is quite common among patients above 50 years of age, patients with diabetes and hypertension.

Key words: Cataract, Diabetes, Hypertension.

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Corresponding Author: Dr. Virender Singh Chauhan, Professor, Department of Ophthalmology, TSM Medical College, Lucknow, Uttar Pradesh, India

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INTRODUCTION

Cataract is a major cause of avoidable blindness and visual impairment throughout the world and is likely to present an increasing burden to health care systems as the world's population ages due to increased life expectancy.[1] Cataract is a major cause of vision impairment in many low-income settings. It remains uncertain as to whether the high levels observed are explained largely by reduced access to cataract surgery or additionally to potential environmental risk factors more prevalent in low-income settings, such as poor diets, occupational sunlight exposure, and use of biomass fuel.[2] here remain significant challenges in both delivery and utilization of cataract surgical services, especially by the most disadvantaged groups in the population.[3] Identification of major risk factors for cataract in the Indian setting will be crucial in planning strategies to reduce or delay the development of this condition. The knowledge of epidemiological situation and its trend is a vital requisite for planning and subsequent review of strategies for the prevention or control of any disease or health-related event in any particular area.[4] Cataract develops from a variety of reasons. Human cataract formation is mostly considered to be a multifactorial disease. Genetically determined cataract is due to an anomaly in the chromosomal pattern of the individual. Main risk factors in the developed world, besides advanced age, appear to be smoking, exposure to sunlight, and use of corticosteroids. A potential association between female gender and cataract remains controversia.[5] The present study was conducted to assess risk factors of cataract in known population.

MATERIALS & METHODS

The present study was conducted among 60 patients of cataract of both genders reported to ophthalmology. All patients were informed regarding the study and written consent was obtained. Data such as name, age, gender etc. was recorded. A through eye examination was performed by eye specialist. Lens opacity was graded according to the Lens Opacity Classification System III (LOCS III). Results thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Total- 60		
Gender	**Males**	**Females**
Number	38	22

Table I, graph I shows that out of 60 patients, males were 38 and females were 22.

Graph I Distribution of patients

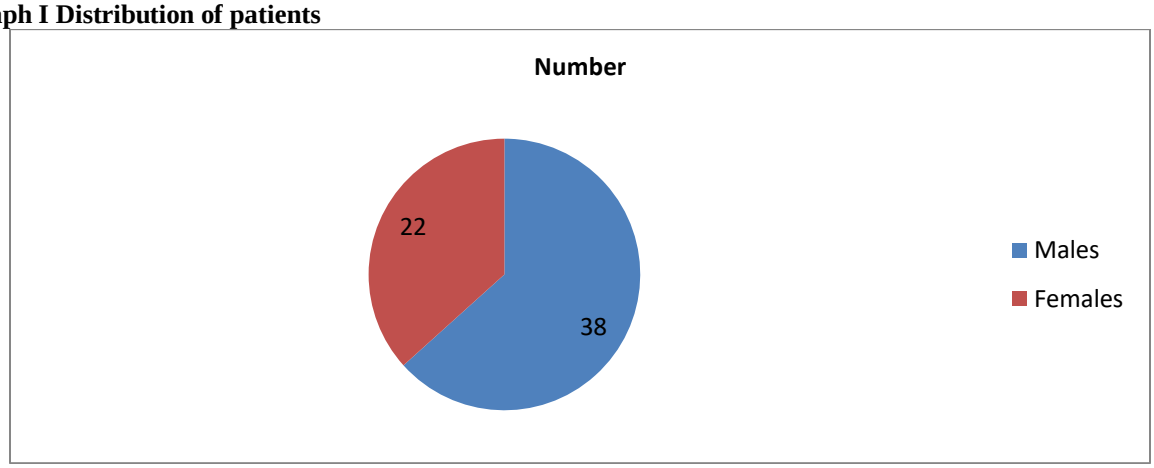
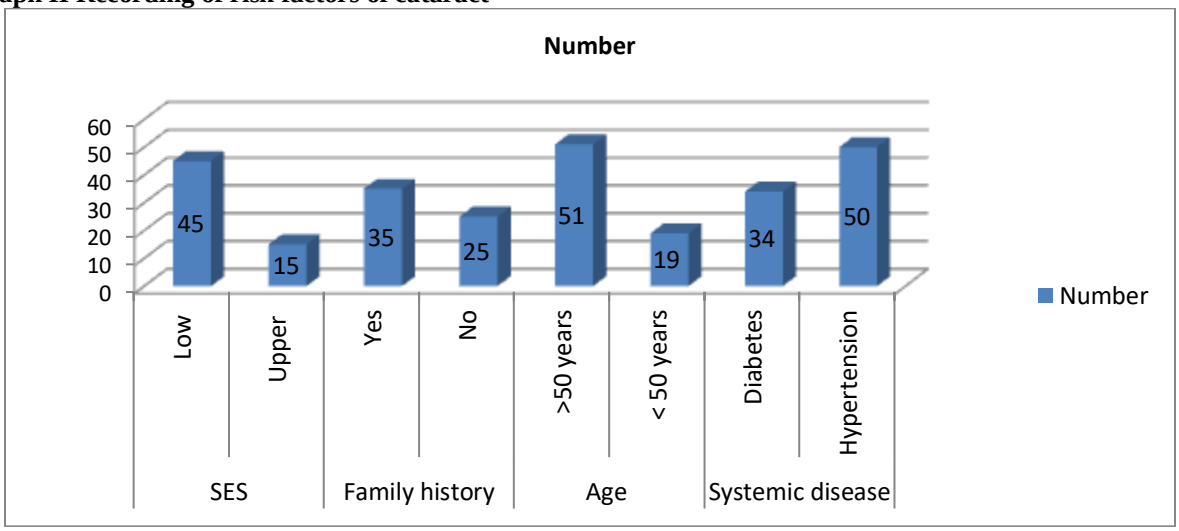


Table II Recording of risk factors of cataract

Variables	Risk factors	Number	P value
SES	Low	45	0.02
	Upper	15	
Family history	Yes	35	0.05
	No	25	
Age	>50 years	51	0.02
	< 50 years	19	
Systemic disease	Diabetes	34	0.12
	Hypertension	50	

Table II, graph II shows that common risk factors of cataract were low SES in 45, positive family history in 35, age >50 years in 51, diabetes in 34 and hypertension in 50. The difference was significant (P< 0.05).

Graph II Recording of risk factors of cataract



DISCUSSION

Cataract is one of the most common causes of visual impairment in the world.[6] According to the World Health Organisation (WHO), cataract is the leading cause of blindness all over the world, responsible for 47.8% of blindness and accounting for 17.7 million blind people. In India, 80% of the blindness is due to cataract.[7] Various modifiable risk factors associated with cataract include UV exposure, diabetes, hypertension, body mass index (BMI), drug usage, smoking and socioeconomic factors; but advancing age is the single most important risk factor for cataract.[8]

We found that out of 60 patients, males were 38 and females were 22. Kohli et al[9] found that out of 125 patients, males were 71 and females were 54. Age group 30-40 years had 10 males, 7 females, 40-50 years had 9 males and 9 females, 50-60 years had 12 males and 10 females, 60-70 years had 26 males and 13 females and >70 years had 14 males and 15 females. The difference was non- significant (P<0.05).

In this study, common risk factors of cataract were low SES in 45, positive family history in 35, age >50 years in 51, diabetes in 34 and hypertension in 50. Vashist et al[10] reported prevalence of 58% in North India and 53% in South India in the older age group (>60 years) with nuclear cataract being the most common type of cataract in both parts of the country. In India, a very few population based studies have been undertaken to explore the risk factors for cataract in older age group, especially since the proportion of the elderly has been significantly increasing in the country; the 60 + population which stood at 56 million in 1991 is now estimated to have doubled in 2016. The present study was conducted to assess risk factors of cataract in adults. Early clinical studies of cataract formation in diabetes mellitus noted a high prevalence of arterial hypertension. The role of smoking in cataractogenesis has been highlighted in various studies. These studies have shown 2-3 fold increased risk of cataract in smokers. The increase in smoking dose was associated with increasing severity of nuclear opacities. A cataract can form after blunt or penetrating injuries to the eye and entry of a difficult-to-remove foreign object, leads to physical damage and discontinuation of the eye lens capsule.[11] Aarthi et al[12] found that out of 594 persons enumerated as eligible for the study, only 547 were examined with an overall response rate of 92.09%, whereas rest of the 47, who could not be contacted, were excluded from the study. Data analysis revealed a cataract prevalence of 24.86% which increased significantly with age. A significant association of cataract was also seen with low literacy status, outdoor occupation, family history of cataract and lower BMI; whereas no association was observed with other factors viz. sex, socio-economic status, diabetes mellitus and hypertension.

Chandrashekhar et al[13] found that the prevalence of unoperated cataract in people aged ≥60 was 58% in north India and 53% in south India. Nuclear cataract was the most common type: 48% in north India and 38% in south India, corresponding figures for PSC were 21% and 17%, respectively, and for cortical cataract 7.6% and 10.2%.

CONCLUSION

Cataract is quite common among patients above 50 years of age, patients with diabetes and hypertension.

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