



A STUDY OF OPHTHALMOLOGICAL PROFILE OF PATIENTS UNDERGOING CATARACT SURGERY.

Ophthalmology

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ABSTRACT

Background – Almost 20% of the blindness cases are seen in India and among these total cases of blindness, cataract is the most common cause of blindness. The important cause of age related cataract is gradual opacification of ocular lens and this can lead to loss of vision. **Method** – Hospital based cross sectional study was carried out among 165 cataract patients assigned to undergo manual small incision cataract surgery for a period of one year in civil hospital Palampur. One day before the surgery these patients were admitted to the indoor wards of department of ophthalmology. From each patient, detailed history was obtained. Visual acuity was checked with Snellen's visual acuity chart and pinhole improvement was noted. **Results**- There were 84 males (50.9%) and 81 females (49%). Cortical cataract was present in 48(29%) of the patients, posterior subcapsular was present in 68(41.21%) and 49(29.69%) had Nuclear cataract. More in age group between 60-69 years. Prevalence of cataract was more in females as compared to males. **Conclusion** - Increasing age and female gender were the most important risk factors in the present study. Posterior subcapsular cataract was more common than nuclear type of cataract.

KEYWORDS

Introduction

Cataract has been documented to be the most significant cause of bilateral blindness in India where vision < 20/200 in the better eye on presentation is defined as blindness. In India cataract has been reported to be responsible for 50-80% of the bilaterally blind in the country.¹ The prevalence of blindness in people ≥50 years in Cape Town, South Africa was lower than expected probably because of high cataract surgery coverage. The total prevalence of surgical cataract in Galle District of Sri Lanka is 0.32%. Women have a significantly higher prevalence than men and nuclear cataract is the most common type. High prevalence of cataract continues in India²

Variations in the prevalence of different types of cataract may also suggest possible etiologic or genetic factors. The evidence to date using comparable methods of cataract measurement that include untreated opacities and aphakia/pseudophakia generally supports a higher prevalence of cataract in various Asian populations.³ Frequency of these 3 types of cataract opacities have been reported to increase from 4 to 50% when the age group changed from 52-64 to 75-85.⁴

This study gives a profile of patients presenting with three types of age related cataracts (cortical, nuclear, posterior subcapsular) and their association with age and sex.

Methods

Study design and procedures-

It was a hospital based cross sectional study. 165 cataract patients were assigned to undergo manual small incision cataract surgery for a period of one year at civil hospital Palampur. Patient with age between 40-70 years were included in the study. A detailed history was obtained from the patient. Pediatric, traumatic, complicated and cataract associated with glaucoma and cases with corneal disorders were excluded from the study.

Examination included visual acuity with Snellen's chart, distant direct ophthalmoscopy and slit lamp examination with dilated pupil. Slit lamp examination with dilated pupil determined the level of lens fibre opacification which was classified as cortical, nuclear and posterior subcapsular using the Lens Opacities Classification System III (LOCS III).⁵

Data was tabulated in the form of tables. The results were expressed in percentages.

Results

Total of 165 patients were examined. The patients examined were between age group 40 to more than 70 years. There were 84 males (50.9%) and 81 females (49%). Cortical cataract was present in 48(29%) of the patients, posterior subcapsular was present in 68(41.21%) and 49(29.69%) had Nuclear cataract. Out of these 29% of

cortical cataract 23(47.9%) were female and 25(52%) were male. Most of the females were in ages above 70 years. Males had cortical cataract mainly in age above 70 years. Out of 68(41.21%) of total posterior subcapsular cataract 33(48.53%) were female and 35(51.47%) were males. In age group 40-49, 50-59, 60-69, 70 above there were 10, 6, 28, 37 females respectively. Out of total females in each age group, 6(60%) females of ages 40-49 years had posterior subcapsular cataract and 3(50%) had in ages 50-59 years, 16(57.14%) in ages 60-69 years and only 8(21.62%) had posterior subcapsular cataract in ages 70 and above. Similarly in males in age group between 40-49, 50-59, 60-69, 70 above there were 12, 10, 32, 30 males respectively. Out of total male in each age group, 6(50%) frequency of posterior subcapsular cataract ages 40-49, 4(40%) in ages 50-59 years, 18(56%) in ages 60-69 and 7(23.33%) in ages 70 and above. Males had this cataract type more in ages from 60 to 69 years (56 %) and less in ages above 70 years (23.33%). In females between ages 40-59 it was present in 2(20%). Nuclear cataract in this study was (29.69%). Out of these 25(51%) were females and 24(48.97%) were males. In females nuclear cataract was 2(20%) in ages 40-49, 2(33.33%) in ages 50-59, 9(32.14%) in ages 60-69 years and 12(32.43%) in ages 70 and above. Males had maximum 9(30%) nuclear cataract in ages above 70 years. In age groups 40-59 years 10(12.34%) were female and 12(14.28%) were male, in age groups 60-69 years 28(34.56%) were female and 32(38.09%) were male. Males with age between 50-59 years had more prevalence of all the three types of cataracts and it was lower in males with age 70 above years. Females have more prevalence of all three types of cataract in the age above 70 years.

Table 1. Prevalence of different types of cataract

Type of cataract	Number (percentage)
Cortical	48(29%)
Posterior subcapsular	68(41.21%)
Nuclear	49(29.69%)

Discussion

In our study, cataract was more in age group above 70 years and was more common in females 37(45.67%) as compared to male 30(35.71%). The prevalence of unoperated cataract increased with age and was higher in women than men. Several population-based studies have found a higher prevalence of both nuclear and cortical opacities in women. The association between education and cataract has also been one of the most consistently reported observations in the epidemiologic studies of cataract.⁷⁻⁹

The prevalence of unoperated cataract in people aged ≥ 60 was 58% in north India (95% CI, 56-60) and 53% (95% CI, 51-55) in south India.³ Posterior subcapsular cataract was more common in patients. More in age group between 60-69 years. We found that corticosteroid usage (either topical, oral, or systemic) was more frequent in our study

population and in almost half the population this was associated with other exposures under study. PSC cataract was the predominant type of cataract in the present study, which was similar to the observations made in other studies. Steroid compounds including topical drops, pills, and inhalers have been associated with significantly increased risk for lens opacity.⁶

Nirmalan PK et al found a prevalence of 47.5% of cataract.⁷ They noted that the prevalence of cataract was low in males, and this is similar to the findings of the present study. They found that nuclear cataract was more common as compared to cortical cataract in their study. But the present study found that posterior subcapsular cataract was more common, which is exactly opposite to the author findings.

Tsai SY et al found a prevalence of 59.2% of cataract. Similar to the present study results, they found a higher prevalence of cataract among women than men. They also noted that as the age increased, the prevalence of cataract increased. We also found that as the age increased, the prevalence of cataract increased.¹⁰

Poor diet, low socioeconomic life style and increasing age have been associated with nuclear cataract. In present study women above 70 yrs have more prevalence of nuclear cataract. In the higher age groups, women tend to suffer from cataract more than do males. This appears to be true particularly in western countries¹¹. According to Venkata, et al., 2005, those aged 70 and above had a five times a higher risk of being blind compared to those aged 50-59 years.¹²

Conclusion

Cataract blindness in Palampur region as well as in rest of the state of Himachal Pradesh can be effectively controlled only if effective strategies are developed to reduce the incidence of blinding cataract.

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