



**ORIGINAL ARTICLE**

**Clinical Profiles and Types of Senile Cataract Patients: Experience of 30 Cases in Bangladesh**

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**Abstract**

**Background:** Senile cataract can be expressed with different clinical presentation. **Objective:** The purpose of the present study was to find out the clinical profiles of senile cataract patients. **Methodology:** This cross-sectional study was conducted at National Institute of Ophthalmology, Dhaka, Bangladesh from January 1999 to December 2000 for a period of two (02) years. Patients with senile cataract were selected for study. The details clinical profiles of the study population were recorded like types, grades of cataract and visual acuity. Data were collected on pre-designed data collection sheet, compiled and appropriate statistical analysis was done using computer based software. **Result:** A total number of 60 eyes of cataract patients were recruited for this study. The mean age with the standard deviation was 58.8±6.055 years. Majority of the patients were suffering from total cataract that is nuclear plus cortical plus posterior subcapsular variety which was 31(51.7%) eyes of cataract patients. Majority of the patients were grade III (amber) type of nuclear sclerosis which was 26(43.3%) eyes of cataract patients. Most of the patients were presented with PL which was 32(53.3%) eyes of cataract patients. **Conclusion:** In conclusion majority of the patients are suffering from total cataract with grade III (amber) type of nuclear sclerosis. [Journal of Current and Advance Medical Research 2019;6(1):38-41]

**Keywords:** types of cataract; grades of cataract; visual acuity

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## Introduction

Cataract was known to be the commonest cause of blindness since the beginning of the civilization<sup>1</sup>. From the time immemorial, ophthalmologists gave prime importance to the problem. It is the leading cause of blindness accounting for nearly 48% of blindness globally<sup>2</sup>. It poses a substantial economic and public health burden especially in developing countries. According to a World Health Organization (WHO) report on global blindness, approximately 90% of global cataract is seen in developing countries and estimates that more than 82% of all blindness occurs in individuals aged 50 and older<sup>3</sup>. It has been estimated that 45 million people are blind with an additional 135 million individuals visually impaired<sup>4</sup>. Globally it is known that cataract is the leading cause of blindness, with some 16 to 20 million people suffering from blinding cataract<sup>5</sup>. In country specific terms, India is the country with the highest number of blind people (over 9 million) with the most prevalent cause of blindness and low vision being unoperated cataract, as indicated by several population based studies over the past two decades<sup>6</sup>.

The burden of cataracts is not limited to financial costs to society alone, older persons living with unoperated cataracts are likely to have significantly reduced quality of life due to low vision<sup>7</sup>. Other comorbid conditions in older persons further reduces their quality of life. Decreases in functional abilities may be attributed to other age-related processes but may actually be associated with the onset of cataract. In addition, smoking, body-mass index, and exercise patterns in midlife and late adulthood have been suggested as predictors of disability in later years. For the average person, efforts to reduce modifiable health risks may result in a postponement of initial disability and decreased lifetime disability<sup>8</sup>. Therefore this present study was undertaken to find out the clinical profiles of senile cataract patients.

## Methodology

This cross-sectional study was conducted at National Institute of Ophthalmology, Dhaka, Bangladesh. This was the referral eye hospital in Bangladesh. This study was carried out from January 1999 to December 2000 for a period of two (02) years. Patients with senile cataract were selected for study. Senile cataract patients with functional disability fully accounted for by cataract formation and not for other ocular pathology were selected as study population. Patients with other

associated ocular disease, preexisting corneal lesion, cataract other than senile type, history of previous ocular surgery in the same eye and patients not attending in all the follow-up visits were excluded from the study. For the purpose of recording, a proforma was prepared containing patients age, sex, occupation, address, chief complaints, history of present illness as well as past ocular and systemic illness, family history and treatment history. Data were collected on pre-designed data collection sheet, compiled and appropriate statistical analysis was done using computer based software (SPSS computer program). Qualitative data were expressed as frequency and percentage and the quantitative data were expressed as mean and standard deviation.

## Results

A total number of 60 cataract patients were recruited for this study. In this study majority were in the age group of 51 to 60 years which was 38(63.3%) eyes of cataract patients and the rest 22(36.7%) eyes of cataract patients were in the age group of 60 to 70 years. The mean age with the standard deviation was 58.8±6.055 years (Table 1).

**Table 1: Age Distribution of Study Population (n=60)**

Age Group	Frequency	Percent
<60 Years	38	63.3
>60 Years	22	36.7
<b>Total</b>	<b>60</b>	<b>100.0</b>

Among 60 cases majority of the patients were suffering from total cataract that is nuclear plus cortical plus posterior subcapsular variety which was 31(51.7%) eyes of cataract patients followed by

**Table 2: Distribution of type of cataract among Study Population**

Type of Cataract	Frequency	Percent
Nuclear alone	4	6.7
Nuclear plus posterior subcapsular	3	5.0
Nuclear plus cortical	6	10.0
Posterior subcapsular	7	11.7
Nuclear plus posterior subcapsular plus cortical	31	51.6
Cortical	7	11.7
Cortical plus post-subcapsular	2	3.3
<b>Total</b>	<b>60</b>	<b>100.0</b>

posterior subcapsular, cortical, nuclear plus cortical, nuclear alone and nuclear plus posterior subcapsular types which were 7(11.7%) eyes of cataract patients, 7(11.7%) eyes of cataract patients, 6(10.0%) eyes of cataract patients, 4(6.7%) eyes of cataract patients and 3(5.0%) eyes of cataract patients respectively (table 2).

Among 60 cases majority of the patients were grade III (amber) type of nuclear sclerosis which was 26(43.3%) eyes of cataract patients followed by grade II (yellowish brown), grade I (soft) and grade IV (rocky hard) which were 25(41.7%) eyes of cataract patients, 7(11.7%) eyes of cataract patients and 2(3.3%) eyes of cataract patients respectively (Table 3).

**Table 3: Incidence of Nuclear Sclerosis Grade in Each Group**

Nuclear Sclerosis Grade	Frequency	Percent
Grade I (soft)	7	11.7
Grade II (Yellowish brown)	25	41.7
Grade III (Amber)	26	43.3
Grade IV (Rocky hard)	2	3.3
Total	<b>60</b>	<b>100.0</b>

Among 60 cases most of the patients were presented with PL which was 32(53.3%) eyes of cataract patients followed by counting finger, 6/60, 6/36 which were 13(21.6%) eyes of cataract patients, 9(15.0%) eyes of cataract patients and 4(6.7%) eyes of cataract patients respectively. Only 1(1.7%) eyes of cataract patients was reported in 6/24 and 3/60 in each (Table 4).

**Table 4: Distribution of Visual Status among the Study Population (n=60)**

Visual Acuity	Frequency	Percent
6/24,with Pinhole	1	1.7
6/36	4	6.7
6/60	9	15.0
3/60	1	1.7
Counting finger	13	21.6
PL	32	53.3
Total	<b>60</b>	<b>100.0</b>

## Discussion

In Bangladesh, eye care services are provided in hospital based clinical services<sup>9-12</sup>. These are usually based in urban areas usually without

outreach facilities. Surgical eye camps and comprehensive eye care link activities in the community with primary eye care and tertiary services. Surgical eye camps have been popular because the services are usually provided free. However, it has been reported that they have recently been undertaken less frequently because of advances in surgical techniques and awareness of a need for high quality surgery and good postoperative follow up<sup>12-14</sup>.

A total number of 60 eyes of cataract patients were recruited for this study. In this study majority were in the age group of 51 to 60 years which was 38(63.3%) eyes of cataract patients and the rest 22(36.7%) eyes of cataract patients were in the age group of 60 to 70 years. The mean age with the standard deviation was 58.8±6.055 years. Similar result was reported by Shori et al<sup>11</sup> and have mentioned that maximum prevalence is seen in the age group of 51 to 60 years i.e. 37.0% followed by 61 to 70 years of 30%. Thus cataract is seen more commonly in the age group of above 50 years which is in consistent with the present study. Congdon et al<sup>13</sup> found a prevalence of 17.2% among Americans of age more than 40 years. They also observed that the prevalence of cataract was more in females. We also found the similar results. They estimated that by 2020, around 30.1 million will have cataract. DeMill et al<sup>14</sup> found a mean age of 72.2 years and found a mean age of 54.8 years.

Among 60 cases majority of the patients were suffering from total cataract that is nuclear plus cortical plus posterior subcapsular variety which was 31(51.7%) eyes of cataract patients followed by posterior subcapsular, cortical, nuclear plus cortical, nuclear alone and nuclear plus posterior subcapsular types which were 7(11.7%) eyes of cataract patients, 7(11.7%) eyes of cataract patients, 6(10.0%) eyes of cataract patients, 4(6.7%) eyes of cataract patients and 3(5.0%) eyes of cataract patients respectively. Shori et al<sup>11</sup> have reported that cortical cataract constituted 86.0% of total cases and remaining 14.0% were constituted by nuclear type of cataract. Murthy et al<sup>10</sup> observed that nuclear opacity was the most common opacity. This constituted 56.9% prevalence. 20.6% of the patients were found to have sub capsular type of opacity. 21.6% of the patients had cortical opacity. The authors found that the prevalence increased with increasing age which agrees with the findings of the present study. Rosser et al<sup>12</sup> found a prevalence of 47.5% of cataract. They found that nuclear cataract was more common as compared to cortical cataract in their study.

Dineen et al<sup>4</sup> found that the cataract surgery prevalence was 5.1%.<sup>8</sup> They observed that nuclear type of cataract was present in 22.6% of cases whereas the cortical type of cataract was present in 23.9% of cases. Thus they reported similar rates for two types of cataract. But we found that the cortical type of cataract was more common than nuclear type of cataract. The author has found that as the age increased the prevalence of cataract also increased. This agrees with the findings of the present study. The authors stated that they found a more prevalence of cataract after home visits as compared to clinic based prevalence. Thus it signifies that many do not turn out to hospitals for early diagnosis and treatment. Hence this is the most common reason of increased prevalence in developing countries as people do not turn out to hospitals. Murthy et al<sup>10</sup> found low rates of 1.3% of cataract surgery. They did not find any significant difference between the sexes, rural or urban residence and differences in the literacy levels. They found that nuclear type of cataract prevalence was 82% as compared to only 10.3% of cortical type of cataract. But it has been found that cortical type of cataract is more common than nuclear type of cataract.

In this study most of the patients were presented with PL which was 32(53.3%) cases followed by counting finger, 6/60, 6/36 which were 13(21.6%) eyes, 9(15.0%) eyes and 4(6.7%) eyes respectively. Only 1(1.7%) eyes was reported in 6/24 and 3/60 in each. Similar result has been reported by Shori et al<sup>11</sup> and has mentioned that majority of the patients i.e. 59.0% had visual acuity of less than 1/60 followed by 33% of having 5/60 to 1/60. 58.0% of the patients had against the rule type of astigmatism. 34.0% of the patients had with the rule type of astigmatism. Only 8.0% had NOA type of astigmatism.

## Conclusion

In conclusion majority of the patients were suffering from total cataract that is nuclear plus cortical plus posterior subcapsular variety. Furthermore, majority of the patients were grade III (amber) type of nuclear sclerosis. Regarding visual acuity most of the patients were presented with PL. Large scale study should be carried out in multicenter basis.

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