

Acquired Cataract in Patients under 60 Years at the University Hospital of Brazzaville

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How to cite this paper: Nganga Ngabou, C.G.F., Messe-Ambia Koulimaya, R., Alandzobo Bouhelo Pam, F., Mokimi Onka, V., Diatewa, B., Bell'Hantier, L.S., Alaomé, S. and Makita, C. (2025) Acquired Cataract in Patients under 60 Years at the University Hospital of Brazzaville. *Case Reports in Clinical Medicine*, 14, 682-689.
<https://doi.org/10.4236/crcm.2025.1412087>

Received: October 27, 2025

Accepted: December 20, 2025

Published: December 23, 2025

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Abstract

We studied cataract before the age of 60 in order to identify the etiologies of this condition in relatively young patients. **Patients and Methods:** We carried out a retrospective descriptive study in the Ophthalmology Department of the University Hospital of Brazzaville. We performed exhaustive recruitment by reviewing all files of patients presenting with cataract during the study period. **Statistical Analysis:** Data were entered in Microsoft Office Excel 365 and analyzed with the public health software SPSS (version 24, Chicago, USA). **Results:** During the study period, 16.4% of cataracts occurred in patients aged 10 to 59 years, *i.e.* 16.4%. The mean age of these patients was 46.97 ± 11.54 years. The sex ratio was 1.13. The main reason for consultation was decreased visual acuity, found in 93.3% of cases. Mature white cataract was the most frequent clinical form, accounting for 47.1% of cases. Diabetes was the most frequently associated risk factor, present in 26.9% of cases. **Conclusion:** Cataract occurring between 10 and 59 years accounted for 16% of cataracts in our study; the most frequent clinical form was mature white cataract, responsible for blindness.

Keywords

Cataract, Patients under 60 Years, Etiologies

1. Introduction

Cataract is the leading cause of blindness worldwide. Its prevalence increases significantly with age [1] [2], particularly after 60 years. Beyond this age, it is difficult to exclude senescence from the mechanism of cataract onset.

While no preventive measure currently exists for senile cataract, there are cer-

tain risk factors for acquired cataract on which preventive actions can be taken, such as smoking, reported by Verma [3], or the use of topical corticosteroids on the skin [4]. To separate these specific etiologies from the influence of age, we decided to conduct a study in patients under 60 years of age.

Few studies have been conducted in these age groups worldwide and even fewer in Africa.

The aim of this study was to investigate the causes of cataract before age 60 at the University Hospital of Brazzaville.

2. Patients and Methods

2.1. Patients

This was a retrospective descriptive study based on the analysis of medical records of patients seen in consultation in the Ophthalmology Department of the University Hospital of Brazzaville from 1 July to 31 December 2024.

2.1.1. Inclusion Criteria

- Patients under 60 years of age
- Patients who underwent an etiological work-up for cataract
- Patients who gave informed consent

2.1.2. Non-Inclusion Criteria

- Patients aged 60 years and older
- Congenital and infantile cataracts
- Incomplete records

2.2. Methods

2.2.1. Ophthalmologic Assessment

Patients underwent:

- Assessment of visual acuity using the Monoyer chart
- Slit-lamp examination
- Measurement of intraocular pressure with Goldmann applanation tonometry
- Fundus examination with a 90-diopter lens

2.2.2. Etiological Work-Up for Cataract

The etiological work-up looked for:

- **Physical or chemical trauma** with or without a foreign body
- **Ocular disease**
 - Anterior uveitis
 - Angle-closure glaucoma
 - High myopia
 - Choroidal melanoma
 - Intraocular tumor
 - Retinitis pigmentosa
 - Ocular ischemic syndrome

- **General disease**
 - Diabetes
 - Hypocalcemia
 - Steinert disease
 - Fabry disease
 - Syndermatotic cataract
- **Iatrogenic cause**
 - After ocular surgery
 - Following topical or systemic corticosteroid therapy
- **Use of cosmetics**
 - In particular dermocorticosteroids used for skin lightening

2.2.3. Sampling

We performed exhaustive recruitment from the records of all patients aged 10 to 59 years who consulted during the study period. In cases of bilateral cataract, only the eye with the lower visual acuity was included. Patients were classified according to their preoperative visual acuity using the WHO classification of visual impairment and blindness [5].

2.3. Statistical Analysis

Data were entered in Microsoft Office Excel 365 and analyzed using the public health software SPSS (version 24, Chicago, USA).

3. Results

Of the 9766 patients seen during the study period, 910 had cataract, giving a cataract frequency of 9.3%.

Of these 910 cataracts, 150 patients were between 10 and 60 years of age, *i.e.* 16.4%.

Of the 150 acquired cataracts in patients under 60, 31 records were not analyzable because of missing data, leaving 119 records for analysis.

The mean age was 46.97 ± 11.54 years, with extremes of 10 and 59 years.

The largest age group was patients aged 50 to 59 years (see **Table 1**).

Table 1. Distribution of patients by age group.

Age group (years)	Number	Percentage (%)
10 - 19	3	2.5
20 - 29	8	6.7
30 - 39	13	10.9
40 - 49	38	31.9
50 - 59	57	47.9
Total	119	100

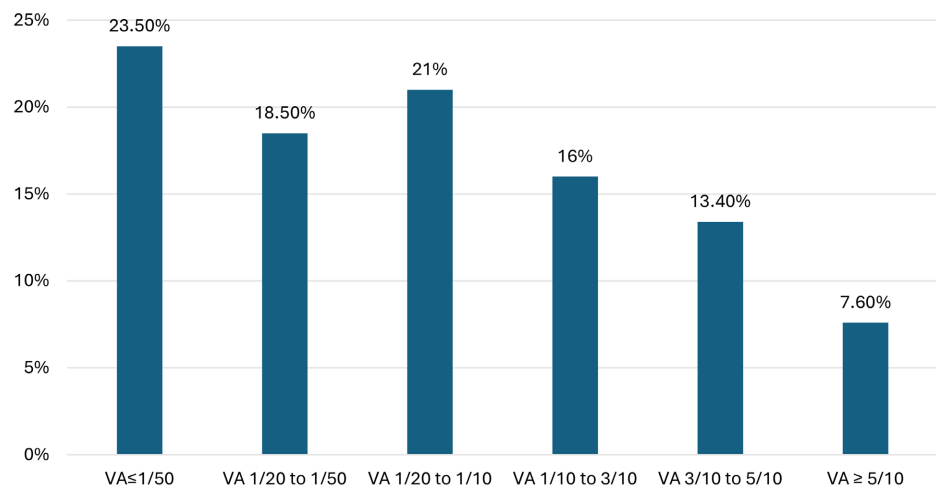
Our study included 63 men and 56 women, giving a sex ratio of 1.13.

Decreased visual acuity was the main reason for consultation (see **Table 2**).

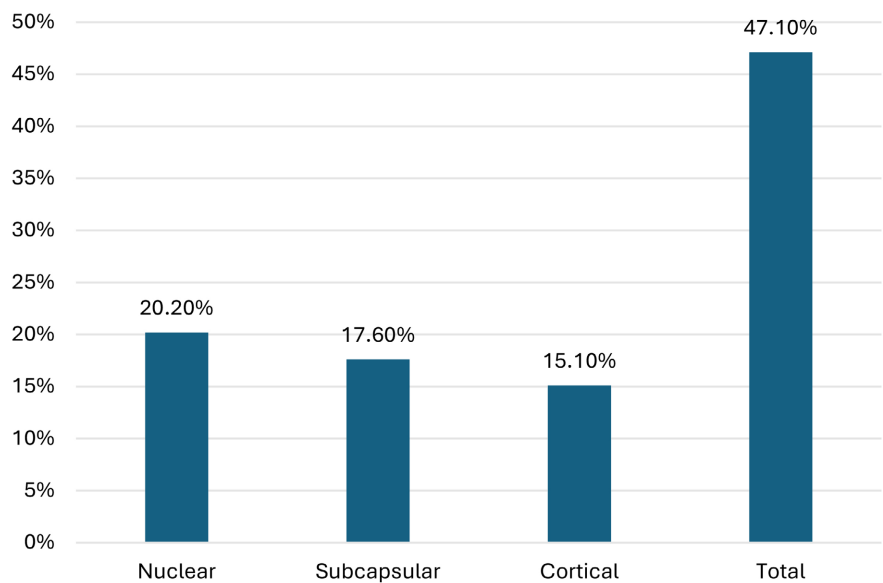
Table 2. Distribution of patients according to reason for consultation.

Reason for consultation	Number	Percentage (%)
Decrease in visual acuity	111	93.3
Diabetes check-up	5	4.2
Glare	1	0.8
Cataract surgery	2	1.7
Total	119	100

A total of 23.5% of patients had visual acuity less than 1/50 (see **Figure 1**).

**Figure 1.** Distribution of patients by visual acuity.

47.1% of patients had mature total white cataract (see **Figure 2**).

**Figure 2.** Distribution of patients by cataract type.

In 53.7% of patients, no history was found (see **Table 3**).

Table 3. General medical history.

Personal history	Number	Percentage (%)
Uveitis	2	1.7
Corticosteroid therapy	2	1.7
Ocular trauma	19	16.0
Diabetes	32	26.9
No history	64	53.7
Total	119	100

4. Discussion

4.1. Frequency and Age Distribution

The frequency of cataract in our study population was 9.3%, and only 16.4% of these cases concerned patients under 60 years of age. The frequency of cataract varies with the age group studied and with each country's capacity to manage this condition. Cedrone [6], who worked in Italy on subjects aged 45 to 69 years, reported a cataract prevalence of 3.7%; this lower frequency is related to better management capacities for this condition in that developed country. Mahdi in Nigeria, in patients aged 40 years and over, observed a cataract prevalence of 19.8%; this prevalence was 2.5% between 40 and 49 years and 9.2% between 50 and 59 years.

The mean age of patients in our study was 46.97 ± 11.5 years. Verma [3] in India, who worked on presenile cataract, found a mean age of 47.3 years.

The predominant age group (47.9%) was patients aged 50 to 59 years, which was also the oldest age group in the study. Kherdekar [7] in India, who worked on relatively younger subjects, found a majority of patients in the oldest age group of his study, 30 to 40 years, accounting for 74.5% of cases. This illustrates the influence of age even among patients under 60 years.

4.2. Sex Distribution

With a sex ratio of 1.13, there was a slight male predominance. Although female predominance is more commonly reported in the literature [3] [7], male predominance has also been found in some studies [8].

4.3. Reasons for Consultation

The main reason for consultation was decreased visual acuity in 93.3% of cases, followed by diabetes follow-up. Decreased visual acuity is usually the first sign of cataract. In his study, Rajesh [9] found it in 98.6% of cases.

4.4. Distribution of Patients According to Visual Acuity

A total of 63% of patients had visual acuity less than 1/10, and 7.6% had visual

acuity greater than or equal to 5/10. Jansone-Langina [10] in Latvia reported a mean preoperative visual acuity with correction greater than 5/10, reflecting earlier management.

4.5. Type of Cataract

The most frequent type of cataract in our study was total cataract, with 47.1% of cases, followed by nuclear cataract in 20.2%. Verma [3] reported 64.2% nuclear cataracts followed by cortical cataracts with 21.7% of cases; total cataracts accounted for 5%. Kherdekar [7] found a predominance of posterior subcapsular cataracts with 45% of cases, followed by nuclear cataracts with 26%; white cataract accounted for less than 9% of cases. The high frequency of total cataracts in our study is likely related to the lower economic level in our country and more difficult access to a center providing eye care.

4.6. Risk Factors

The reported risk factors help to better understand the mechanisms leading to these cataracts.

However, in 53% of cases we did not identify any of the risk factors investigated. In his study, Verma [3] likewise did not identify risk factors in 65.9% of cases. There are factors whose involvement can be suspected but not demonstrated, such as sun exposure already mentioned by Kherdekar [7], or simply age approaching 60 years. In our series, 47.9% of patients were between 50 and 59 years old, suggesting presenile cataract.

Diabetes, a well-known cause of cataract, was found in 26.9% of patients, making it the leading identified cause of cataract before age 60. Kherdekar [7] also reported diabetes as the leading cause of presenile cataract with 48.5% of cases, whereas it ranked second after smoking in the study by Verma [3].

Trauma accounted for 16% of cataract causes. This factor, predominant among younger patients, reflects the impact of accidents often related to occupational or domestic activities. Traumas accounted for 6.9% of cataract causes in the study by Doutetien [11]. This lower frequency in that study is due to the inclusion of all cataracts, not only cataracts in subjects under 60 as in our study.

Uveitis was responsible for 1.7% of cataracts; this result is close to that of Praveen [8], who found 1.2% of cataracts related to uveitis.

Long-term corticosteroid therapy is known for its adverse effects, including corticosteroid-induced cataract; its frequency in our study was 1.7%. A particular aspect of this risk factor in our series was the use of dermocorticosteroids for skin lightening. This risk factor, already reported by Fanny [4] in Côte d'Ivoire, leads to cataract after five to ten years of continuous use of dermocorticosteroids to lighten and maintain a lighter skin tone.

4.7. Implications

The results of this study highlight the diversity of etiologies of cataracts in patients

under 60 years, while emphasizing certain modifiable factors such as diabetes control and reduction of exposure to trauma and harmful substances.

The use of dermocorticosteroids for skin lightening, although not quantified in this study, could be explored further in future work, given its possible impact on ocular structures.

5. Conclusion

Cataract remains a real public health problem even in patients under 60 years of age, as 16.4% of cases in our series occurred in this age group. In 47.1% of cases, it was a mature white cataract. The etiology was not identified in 53% of cases, while diabetes and ocular trauma were the most frequently identified causes. To better clarify other causes of cataract before age 60, it would be useful to conduct further investigations with larger samples.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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