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Reasons for Patients' Refusal of Cataract Surgery: A Survey of 29 Patients in the Ophthalmology Department at the Teaching Hospital of Bouaké

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ABSTRACT

Introduction: *The acceptance of cataract surgery faces several challenges in developing countries. The aim of our study was to identify the main reasons why patients at the Teaching Hospital of Bouaké refuse cataract surgery.*

Methodology: *This was a retrospective cross-sectional study conducted in the Ophthalmology Department at the Teaching Hospital of Bouaké, covering the period from January 1, 2024, to December 31, 2024. The study population consisted of patients who had been scheduled for cataract surgery but had not undergone the procedure. These patients were contacted by phone to determine the main reason for not attending their scheduled surgery. The variables studied included patients' sociodemographic characteristics, visual acuity, disease duration, laterality of the cataract, and the primary reason for refusing surgery. Data analysis was conducted using IBM SPSS version 20; IBM.*

Results: *A total of 29 patients met the study's selection criteria. The average age was 68.3 years. Patients with secondary or higher education levels accounted for 38% and 17.2% of the sample, respectively. The disease had been progressing for more than five years in 38% of patients. The most common reason for refusing cataract surgery was fear (20.7%), followed by insufficient information about the procedure (17.3%). Three patients declined surgery based on the advice of a close relative.*

Conclusion: *Fear, lack of awareness, and misinformation about surgical outcomes are the primary reasons for refusing cataract surgery. Continuous awareness campaigns to promote acceptance of cataract surgery remain essential.*

Keywords

Cataract, Surgery, Refusal, Côte d'Ivoire.

Background

Cataract is the opacification of the eye's crystalline lens, leading to a progressive decline in visual performance. It is the leading cause of preventable blindness and remains a significant public health issue [1]. Globally, cataracts account for 50% of avoidable blindness cases in developing countries [2]. In sub-Saharan Africa, cataracts are responsible for 35% of blindness cases among adults over the age of 50 [3].

Cataract treatment is exclusively surgical, with the primary goal of restoring vision. Since cataract-induced blindness is reversible, surgery should be considered when visual function no longer meets a patient's needs, provided there are no contraindications. Cataract surgical techniques have advanced significantly over the decades, evolving from intracapsular extraction to modern

phacoemulsification. Despite these technological advancements, the number of cataract surgeries performed remains low in many African regions. In developing countries, the cataract surgical rate is only 200 cases per million inhabitants per year, compared to 5,000 in developed nations [4].

Several studies highlighted that in Africa, cataract surgery is often delayed for various reasons, including financial constraints, fear of surgery, geographic inaccessibility, and a shortage of ophthalmic surgeons [5,6]. In Cameroon, Nomo's study revealed that only 26.8% of patients with operable cataracts underwent surgery [7]. Ensuring that cataract surgery is accessible to all remains a major challenge. Beyond barriers to healthcare access, cultural influences and lack of information may also contribute to the low surgical rates in many regions. The objective of our study was to determine the reasons why patients refuse cataract surgery, thereby providing insights to improve surgical acceptance and access.

Materials and Methods

This was a retrospective cross-sectional study conducted from January 1 to December 31, 2024. The target population consisted of patients who had been scheduled for cataract surgery but had not undergone the procedure.

We identified these patients using the surgical program register and the operative report register. Patients whose names appeared in the surgical program register but were absent from the operative report register were selected for the study. These patients were contacted by phone. If they could not be reached on the first attempt, two additional calls were made at two-day intervals to maximize the chances of reaching them. After three unsuccessful attempts, patients were considered lost to follow-up and were excluded from the study. For patients who were successfully contacted, we first obtained their verbal consent before proceeding with the survey. They were asked whether they had undergone cataract surgery at another medical facility. Those who responded affirmatively were excluded from the study. Patients who had not been operated on elsewhere were then asked why they had not attended their scheduled cataract surgery. Those who cited financial constraints were also excluded, as we considered financial incapacity an inability to undergo surgery rather than a deliberate refusal.

The primary reason for refusing surgery was recorded on an anonymous survey form after discussion with the patient. The medical record of the selected patients were reviewed, and the following sociodemographic and clinical variables were documented:

- Sociodemographic data: Age, gender, educational level, occupation, and place of residence.
- Clinical characteristics of cataract: Duration of progression, visual acuity, anatomical type, and laterality.

Verbal consent was obtained from each patient before using their responses for the study. Notably, no contacted patient refused to participate in the questionnaire. The variables were expressed as proportions and averages. Analysis was conducted using the Statistical Package for Social Science version 20 (IBM SPSS version 20; IBM), and descriptive and summary statistics were computed for relevant variables.

Results

A total of 29 patients were selected according to the study's selection criteria.

Age of Participants

The majority of patients were over 60 years old. The average age was 68.3 years, with a range from 37 to 96 years.

Table 1: Distribution of patients by age.

Age range	Number	Percentage
≤ 40 years	1	3.4
[41-50 years]	1	3.4
[51-60 years]	3	10.3
[61-70 years]	11	38
[71- 80 years]	8	27.6
≥ 81 years	5	17.3
Total	29	100

Gender of Patients

In terms of gender distribution, women were the majority, accounting for 62% of the study population, with a sex ratio of 0.6 (male-to-female).

Residence of Patients

Regarding place of residence, 69% of patients lived in the commune of Bouaké, while 31% resided outside the city.

Educational Levels

Educational levels varied among the patients:

- 38% had a secondary education,
- 17.2% had a higher education,
- 24.1% had a primary education,
- 20.7% had no formal education.

Profession of Participants

Retired civil servants were the most represented occupational group in our study, followed by housewives, farmers, and informal sector workers.

Table 2: Distribution of patients by profession.

Profession	Number	Percentage
Informal sector	6	20.7
Private sector employee	3	10.5
Student	1	3.4
Retired civil servant	7	24.1
Housewife	6	20.7
Farmer	6	20.7
Total	29	100

Progression of Desease

Regarding disease progression, patients who had experienced symptoms for more than 5 years were the most common, accounting for 38% of cases. They were followed by those with a disease duration of 1 to 5 years (34.4%). Patients whose cataract had developed in less than 1 year made up 27.6% of the study population.

Visual Acuity of Patients

The majority of patients had visual acuity below 'count fingers'.

Table 3: Distribution of patients by the distance visual acuity of the eye scheduled for surgery.

Visual acuity	Number	Percentage
PL+	9	31
VHM	14	48.3
CF	4	13.8
≥ 1/10	2	6.9
Total	29	100

PL+: positive light perception; VHM: vision of hand movements; CF: count fingers

Laterality of the Cataract

The cataract was unilateral in the right and left eyes in 44.9% and 34.4% of cases respectively. In 20.7% of patients the cataract was bilateral but only one eye had been scheduled for surgery.

The Type of the Cataract

The majority of cataracts scheduled for surgery in our patients were of the corticonuclear type (58.6%). The cataract was total in 24.1% of patients. The posterior subcapsular form was found in 10.4% of cases. Other anatomical forms of cataract were found in 6.9% of cases.

Main Reason for Refusing Surgery

Patients who refused surgery out of fear or lack of sufficient information accounted for 38%.

Table 4: Distribution of patients by main reason for refusing cataract surgery.

Main reason for refusing surgery	Number	Percentage
Fear of surgery and anaesthesia	6	20.7
Lack of sufficient information about surgery	5	17.3
Doubt about satisfactory outcome of surgery	4	13.8
Unavailability for post-operative follow-up	4	13.8
Refusal on the advice of a relative	3	10.3
Refusal due to the use of traditherapy	3	10.3
Feels too old to undergo surgery	2	6.9
Other reasons not clearly defined	2	6.9
Total	29	100

Discussion

In our study, patients aged 61 to 70 years were the most represented, with an average age of 68.3 years. Our findings were similar to those of a study conducted in Ethiopia, where patients aged 51 to 70 years accounted for 79.4% of cases [1]. Another study in Guinea found that cataract patients aged 76 years were the most represented (34.7%) [8]. Similarly, in Iran, Mahammaadi [9] reported an average age of 68.6 ± 9.2 years for patients undergoing cataract surgery. These studies, like ours, confirm that individuals over 60 years are the most affected by cataracts. This high prevalence is attributed to senile cataracts, as advanced age remains the primary etiological factor.

We observed a female predominance in our study, with a sex ratio of 0.6. A similar trend was reported by Ebana [10] in Cameroon, with a sex ratio of 0.77. A study in India also found a higher prevalence of cataracts among women [11]. However, other studies in Africa and worldwide reported a male predominance among cataract patients and those who underwent surgery [12,13]. The variation in sex ratio across studies may be due to differences in patient selection criteria.

In terms of residence, most of our patients lived within the commune of Bouaké. Distance was not mentioned as a reason for refusing surgery. This contrasts with a study by Afetane et al. [14], which found that 61.37% of non-operated cataract patients lived outside Yaoundé, and for some, distance was a barrier to surgery.

Regarding educational level, 55.2% of patients who refused cataract surgery had at least a secondary education. This suggests that educational level did not influence surgical acceptance in our study. This contrasts with findings from Okudo [13] in Nigeria, where 79.3% of patients who refused surgery had no formal education, and 64.2% were illiterate. Similarly, in Ethiopia, Bizuneh [1] reported that 78% of non-operated cataract patients had no education, while Briesen [15] found that 95.2% of patients who refused free cataract surgery were uneducated. The difference between our study and these findings may be due to socioeconomic and geographical factors. Many of these studies were conducted in rural settings, where literacy rates are lower, whereas our study was conducted in Bouaké, the second-largest city in Côte d'Ivoire, where the school enrollment rate is relatively higher.

Regarding occupation, retired civil servants were the most represented group, followed by informal sector workers, housewives, and farmers in equal proportions. Our findings align with Sovogui [8], who found that housewives (43.9%) and farmers (32.1%) were the most affected by cataracts. However, our results differ from Djiguindé [6], who reported that 82.82% of cataract patients were engaged in agricultural and domestic activities. The higher proportion of retired civil servants in our study may be due to the fact that it was conducted in an urban setting, where many government offices and administrative services are located.

Patients with a cataract that had progressed for more than 5 years were the most represented, followed by those whose disease had progressed for between 1 and 5 years. Our results are similar to those of the study by Pryadharthini [11] in southern India. In this study, the authors found that 35.4% of patients took more than 5 years from the onset of the first symptoms of their disease to

first eye surgery. Similarly, Okudo [13] in Nigeria showed that 49.1% of cataract patients had their visual problem for more than 3 years. This long waiting period for patients before considering treatment can be explained by the fact that the majority of them are of advanced age and may attribute the drop in visual acuity to old age before admitting that it is due to damage to a structure of the eye. There is also the weight of cultural influences on access to eye care in our regions. Mystical causes of visual problems are often evoked by the population, resulting in consultations with healers for years before they are finally brought to a health centre. In a study carried out in Côte d'Ivoire, 22.22% of blind patients claimed that their blindness was due to a mystical illness [16].

The patients in our series with visual acuity limited to 'sees moving hand' represented almost half of the population, followed by those with visual acuity limited to positive light perception. Our results are consistent with the literature, which has shown that in developing countries, patients presenting with cataracts most often have significantly impaired visual acuity [13,17]. This was reasonably due to the long waiting time before consulting a health professional for most of them. The number of patients who refused surgery despite having bilateral cataracts was 20.7%, and a quarter of patients had a total white cataract in the eye scheduled for surgery. We note that despite the significant visual handicap induced by the bilaterality and total opacification of the lens in these patients, the surgery was not accepted by them. This shows that acceptance of cataract surgery did not depend exclusively on the degree of visual impairment suffered by patients and its impact on their daily lives.

Patients who refused surgery because of fear were the most represented at 20.7%, followed by those who felt that they had not been given sufficient information about the treatment at 17.3%. Other reasons such as doubts about a satisfactory outcome, unavailability or even the recommendation of a relative were cited by patients as the main reasons for refusing surgery. Our results were similar to those of the study conducted in China, which showed that lack of information was the main barrier to acceptance of cataract surgery in rural areas [18]. Another study conducted in India showed that almost a quarter of patients (24.2%) refused surgery because of fear and 38.6% for reasons of domestic occupation [19]. In his study Nomo [7] noted that 33% of patients in his series who refused surgery cited fear. In Ethiopia, the main reasons given by patients refusing cataract surgery were fear, distance from the centre and unsatisfactory results in a relative who had already undergone surgery [1]. In Sri Lanka too, lack of knowledge about surgery was cited by patients as the main reason for refusing cataract surgery [20]. In Indonesia, 13.8% of patients had rejected the option of surgery for fear of unsatisfactory results [21]. Several other studies carried out in developing countries had identified lack of information, fear and lack of time as the main reasons for patients refusing cataract surgery [22,23]. Other studies have also shown other main reasons for refusing surgery. This is the case of the study by Afetane [14], which showed that the cost of surgery was the main obstacle to surgery in Cameroon. This difference with the results of our study could be explained by the fact that we excluded from the outset patients who cited financial reasons for not having their operation. Elsewhere in India, a study showed that 33.4% of patients felt that their disease was not sufficiently advanced to undergo surgery [24]. Lack of knowledge about cataracts and cataract surgery among the population, whether literate or illiterate, gives rise to all kinds of rumours which lead to a reduction in the acceptability of surgery. There is a real need for ongoing communication and awareness-raising among our populations to encourage acceptance of cataract surgery if we hope to reduce blindness linked to the disease in developing countries such as Côte d'Ivoire.

Conclusion

Cataract remains a major cause of reversible blindness in developing countries. The mastery of cataract surgery and its routine practice by practitioners appear to be an opportunity to reduce blindness linked to the disease. However, it has to be said that in countries such as Côte d'Ivoire, regardless of the cost of surgery, fear, patients' ignorance of surgery and misinformation about the functional results of surgery remain factors that considerably limit the acceptability of cataract treatment in hospital. Countering these rumours remains a challenge if we are to achieve cataract surgery rates comparable to those in developed countries.

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