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The difficulty of access to senile cataract treatment in Aparecida de Goiânia – Goiás. Brazil

A dificuldade de acesso ao tratamento da catarata senil em Aparecida de Goiânia – Goiás, Brasil

Mariana Melo Soares[1] https://0000-0001-9226-9514
Alice Sousa Almeida[1] https://0000-0001-6528-1761
Raquel Oliveira dos Santos[1] https://0000-0003-1133-6231
Karise Oliveira Marques[2] https://0000-0002-2620-7603

ABSTRACT

Objective: *To identify the difficulties of patients with senile cataract in the access to the facectomy by Unified Health System (SUS – Sistema Único de Saúde) in the Medical and Diagnostic Center (CEMED) of Aparecida de Goiânia.* ***Methods:*** *Cross-sectional and observational research with data collection from a standardized questionnaire applied preoperatively.* ***Results:*** *The sample consisted of 150 patients: 56% women and 44% men. The average age was 66.05 ± 9.21 years. Most (57.3%) had a previous diagnosis of cataract and, of these, 56.7% did not seek previous treatment. The reasons that prevented previous treatment were: difficulty in accessing the health service (43.5%), fear of surgery (18.8%) and lack of clinical condition for surgery (18.8%). 78.7% of patients would like to have surgery on the same day they are diagnosed with cataract. 21.3% were against this proposal, and the fear of surgery (65%) was the main reason for not performing the facectomy immediately. Regarding the impairment in activities of daily living (ADL), 20.6% could not read magazines and newspapers, in contrast, 20.6% reported no significant impairment in their ADL.* ***Conclusion:*** *The main difficulties in accessing senile cataract treatment were: difficulty in accessing the specialized health system, fear of the procedure, lack of clinical condition for surgery. Thus, it is necessary to promote good quality and affordable surgery; carrying out projects that facilitate diagnosis and treatment, that act in population education, promoting population awareness and stimulating the search for treatment.*

Keywords: *Cataract; Cataract extraction; Health Services Accessibility; Eye vision; Ophthalmologic surgical procedures; Community health services; Unified Health System*

RESUMO

Objetivo: Identificar as dificuldades dos pacientes portadores de catarata senil no acesso a facectomia pelo Sistema Único de Saúde (SUS) no Centro Médico e Diagnóstico (CEMED) de Aparecida de Goiânia. **Métodos:** Pesquisa transversal e observacional com coleta de dados a partir de questionário padronizado aplicado no momento pré-cirúrgico. **Resultados:** A amostra foi composta por 150 pacientes: 56% mulheres e 44% homens. A média de idade foi de 66,05±9,21 anos. A maioria (57,3%) possuía diagnóstico prévio de catarata e, destes, 56,7% não procurou tratamento anterior. Os motivos que impossibilitaram o tratamento prévio foram: dificuldade de acesso ao serviço de saúde (43,5%), medo da cirurgia (18,8%) e falta de condição clínica para a cirurgia (18,8%). 78,7% dos pacientes gostariam de realizar a cirurgia no mesmo dia em que são diagnosticados com catarata. 21,3% foram contra essa proposta, sendo o medo da cirurgia (65%) o principal motivo para a não realização imediata da facectomia. Quanto ao prejuízo nas atividades de vida diária (AVD), 20,6% não conseguiam ler revistas e jornais, em contrapartida, 20,6% não relataram prejuízo considerável em suas AVD. **Conclusão:** As principais dificuldades de acesso ao tratamento da catarata senil foram: dificuldade de acesso ao sistema de saúde especializado, medo do procedimento, falta de condição clínica para cirurgia. Assim, mostra-se necessária a realização de projetos que facilitem o diagnóstico e tratamento, que atuem na educação populacional, promovendo a conscientização da população e estimulando a procura pelo tratamento.

Descritores: Catarata; Extração de catarata; Acesso aos serviços de saúde; Visão Ocular; Procedimentos cirúrgicos oftalmológicos; Serviços de saúde comunitária; Sistema Único de Saúde

[1] Alfredo Nasser College, Aparecida de Goiânia County, GO, Brazil.
[2] Medical and Diagnostic Center (CEMED - Centro Médico e Diagnóstico), Aparecida de Goiânia County, GO, Brazil.

Institution: Alfredo Nasser College

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Introduction

Cataract is the main cause of reversible blindness worldwide; it accounts for approximately 50% of cases. [1] This disease is defined as the clouding of the lens and it can have congenital or acquired etiology, which leads to impaired visual acuity. Senile cataract is the most prevalent acquired etiology type, which makes old age the single most significant risk factor for cataract development. [1-5]

According to the World Health Organization (WHO), there are approximately 40-45 million blind individuals and 135 million individuals with severely impaired visual acuity worldwide. [3] Senile cataract affects approximately 17.6% of individuals younger than 60 years living in Brazil; this rate rises to 47.1% among individuals in the age group 65-74 years and to 73.3% among individuals older than 75 years. [2]

The gradual loss of visual acuity compromises patients' quality of life and hinders activities of daily living (ADL) such as reading. In addition, it can trigger psychological issues, cause occupational restrictions and, consequently, reduce individuals' family income. Thus, cataract has strong impact on labor power and represents a serious public health issue for society. [6,7]

Surgery is the most effective cataract treatment; it consists of replacing the opaque lens with intraocular lens (IOL). [7] This procedure is recommended for patients whose quality of life is compromised by the disease. [6] Thus, facectomy enables restoring patients' visual acuity, a fact that favors their reintegration to society and their return to work activities. However, access to cataract surgery is hampered by socioeconomic and cultural barriers in developing countries such as Brazil.

In addition, the increase in population's life expectancy has increased the incidence of cataract in the country. Consequently, it increased the number of necessary facectomy procedures. However, the Brazilian Unified Health System (SUS - Sistema Único de Saúde) is unable to meet the national demand; thus, non-operated cases have been accumulating over the years. [6,8]

According to WHO, it is necessary conducting 3,000 cataract surgeries/million inhabitants/year in a given region, or country, in order to eliminate cataract-associated blindness. [9] The Brazilian Unified Health System (SUS) must conduct at least 390 thousand cataract surgeries/year to eliminate installed blindness in 65% of the population. On the other hand, 720 thousand surgeries/year would be necessary to prevent it. [2]

The need of performing preoperative exams increases the number of times patients go to the hospital until surgery day, which is an obstacle to treatment effectiveness. According to patients' context, removing these impediments allows them to have easier access to facectomy, helps promoting health and preventing cataract-associated blindness. [6]

The aim of the current study was to identify difficulties faced by senile cataract patients in accessing SUS-related surgical treatment at the Medical and Diagnostic Center (CEMED) in Aparecida de Goiânia County, Goiás State, Brazil.

Methods

A cross-sectional observational survey was conducted based on data collected from November 2018 to February 2019. The study sample consisted of Brazilian Unified Health System (SUS) patients who underwent cataract surgery at the Medical Center and Diagnosis (CEMED) in Aparecida de Goiânia County (Goiás State, Brazil). Study participants were randomly approached in the waiting room of the clinical center, before surgery, when they were informed about the research aim and were invited to verbally answer the questionnaire as volunteers.

Inclusion criteria comprised being a SUS patient, having been diagnosed with senile cataract, undergoing surgery at CEMED in Aparecida de Goiânia County and promptly answering the questionnaire. Private patients diagnosed with other ocular pathologies, who refused to participate in the research, who did not promptly answer the questionnaire or who did not sign the Informed Consent Form (ICF) were excluded from the study.

Data collection was based on the application of a standardized questionnaire (6, 8, 10, 11) (Figure 1) comprising twelve objective questions associated with socioeconomic aspects and with cataract diagnosis and treatment processes; as well as two discursive questions aimed at explaining two objective questions. Participants verbally answered the questionnaire on a voluntary basis and signed the informed consent form. A study based on data collected through the questionnaires was carried out.

Data were analyzed in SPSS 23 (Statistical Package for Social Science). Patients' profile was described through absolute (n) and relative (%) frequencies, mean and standard deviation. Data normality was checked through Shapiro-Wilk test. Association between the time when visual acuity started decreasing and aspects such as age, sex and wearing glasses was analyzed through Pearson's Chi-square and Kruskal-Wallis tests - significance level was set at 5% ($p < 0.05$).

Results

The final sample comprised 150 patients: 84 (56%) women and 66 (44%) men. Patients' age ranged from 38 to 89 years; their mean age was 66.05 ± 9.21 years (Figure 2). Most patients lived in Senador Canedo County (50%). With respect to schooling, most individuals attended elementary school (66%). Approximately 62% of patients did not work and most of them were retired due to old age (53.8%), as shown in Table 1. In addition, most of the sample (77.3%) lived alone (Table 1).

With respect to visual acuity decrease time, 66 individuals (44%) reported visual loss onset in the previous 1 to 5 years, whereas 56 individuals (37.3%) reported more than 5 years and only 28 (18.7%) reported less than one year. The use of glasses was reported by 53.3% of patients. Almost the entire sample (97.2%) had already undergone previous eye examination. Most participants (57.3%) had been previously diagnosed with cataract and 56.7% among them did not undergo previous treatment. The main reason preventing previous therapeutic intervention was the hard time to have access to the health service (43.5%), which was followed by fear of surgery (18.8%) and lack of clinical condition for surgery (18.8%). The most reported waiting time for the first consultation was 1 to 3 months (66%), as shown in Table 3.

Most patients (92%) reported having to return to the clinical center for preoperative exams 1 to 3 times. The most mentioned time between diagnosis and surgery was 1 to 3 months (35.3%), whereas the second most mentioned waiting time was more than 24 months (30.7%). Most patients (78.7%) were in favor of having surgery on the same day they were diagnosed with cataracts. Among the 21.3% patients who were against this hypothesis, fear of surgery (65%) was the main reason for not undergoing

QUESTIONNAIRE

INICIALS: _____ REG.: _____

AGE: ( ) years SEX: ( ) PROFESSION: _____

PLACE OF ORIGIN: _____ SCHOOLING: _____

1. Do you work? Yes ( ) No ( )
2. If you don't, why? _____
3. Do you live alone? Yes ( ) No ( )
4. How long since your visual acuity started to decrease? < 1 year ( ) 1-5 years ( ) > 5 years ( )
5. What did you stop doing due to visual acuity decrease?
   a) Working ( ); b) Walking alone on the street ( ); c) Recognizing people ( ); d) Watching TV ( );
   e) Reading bus display boards ( ); f) Reading newspapers/magazines ( )
6. Do you use glasses? Yes ( ) No ( )
7. Have you ever had an eye exam? Yes ( ) No ( )
8. Did you know you had cataract before you came to CEMED? Yes ( ) No ( )
9. If so, why didn't you seek treatment before?
   Fear of surgery ( ); Hard time having access to the health service ( );
   Hard time finding an accompanying person ( ); It took too long to schedule surgery ( );
   Lack of clinical condition for surgery ( )
10. How long did you wait for the first consultation at CEMED?
    1-3 months ( ) 3-6 months ( ) 6-9 months ( ) 9-12 months ( ) 12-24 months ( ) > 24 months ( )
11. How many times did you return to the clinical center for preoperative exams between diagnosis and surgery?
    1-3 times ( ) 3-5 times ( ) >5 times ( )
12. How long did it take from diagnosis to surgery?
    1-3 months ( ) 3-6 months ( ) 6-9 months ( ) 9-12 months ( ) 12-24 months ( ) >24 months ( )
13. Would you like your surgery to be performed on the same day of the diagnosis? Yes ( ) No ( )
14. Why? _____

Figure 1: Standard questionnaire

facectomy right away (Table 4).

With respect to impairment in ADL, 20.6% of patients reported to be unable or to have significant difficulty in reading magazines and newspapers, 13.4% reported difficulty in watching TV and 10.7% could no longer walk alone on the street. On the other hand, 20.6% did not report considerable losses in ADL (Figure 4).

Discussion

The prevalence of senile cataract in the age group 60-79 years (mean age of 66.05 ± 9.21 years) observed in the current study is in compliance with the literature. Aging was the main risk factor for disease development. (2,3,4,12)

Most patients in the sample had low schooling level and

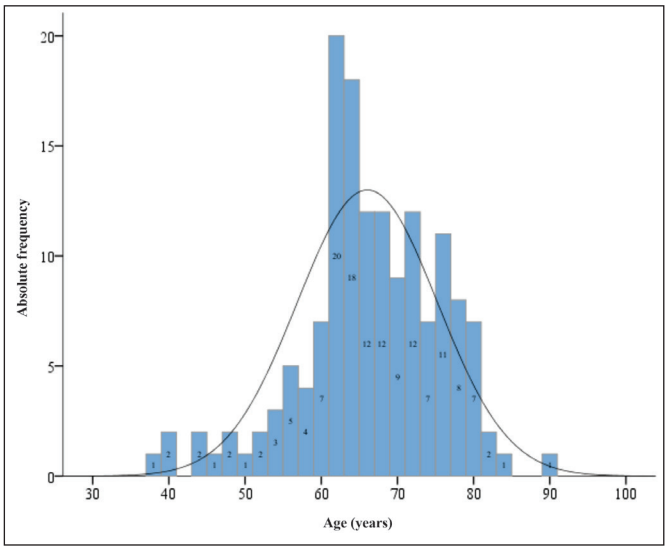

Figure 2: Patients' age group distribution

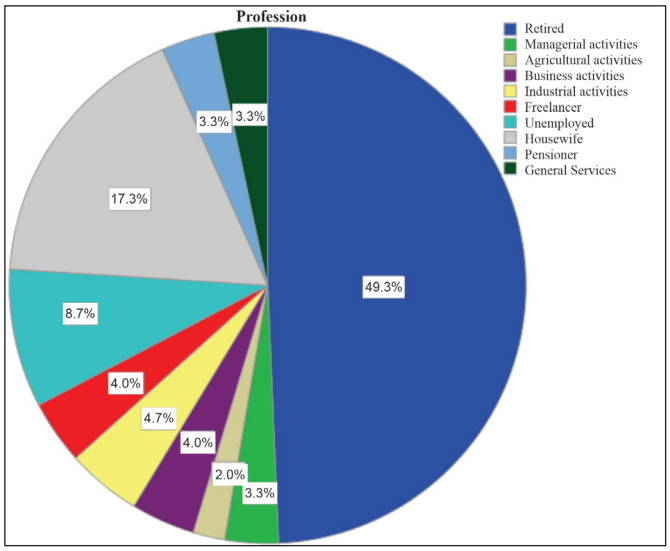

Figure 3: Patients' profession description

Table 1
Description of patients' sociodemographic profile

		n	%
Age group (years)			
	38-50	25	16.7
	60-79	116	773
	80-89	9	6
Sex			
	Female	84	56
	Male	66	44
Place of origin			
	Goiás State capital	2	13
	Goiás State countryside	145	96.7
	Other states	3	2
Schooling			
	Illiterate	34	22.7
	Elementary school	99	66
	Secondary school	10	6.7
	Higher education	5	33
	Never went to school	2	13
Working			
	No	94	62.7
	Yes	56	37.3
Reason for not working			
	Retired	50	53.8
	Unemployed	8	8.6
	Disabled	29	313
	Pensioner	6	63
Living alone			
	Yes	116	773
	No	34	22.7

n = absolute frequency; % = relative frequency

Table 2
Description of factors associated with vision acuity, examination and treatment

		n	%
Time of visual acuity decrease			
	< 1 year	28	18.7
	1-5 years	66	44
	>5 years	56	37.3
Use of glasses			
	No	70	46.7
	Yes	80	53.3
Previous eye examination			
	No	4	2.7
	Yes	146	97.3
Previously aware of having cataract			
	No	64	42.7
	Yes	86	57.3
Sought treatment			
	No	85	56.7
	Yes	65	43.3
Reason for not seeking treatment			
	Hard time to have access to the health service	37	43.3
	Hard time to find an accompanying person	1	13
	Lack of clinical condition for surgery	16	18.8
	It took too long to schedule surgery	15	17.6
	Fear of surgery	16	18.8
Time elapsed until the first consultation			
	> 12 months	9	6
	1 - 3 months	99	66
	3 - 6 months	25	16.7
	6 - 12 months	17	11.3

n = absolute frequency; % = relative frequency

Table 3
Description of preoperative exams, diagnosis and surgery

	n	%
Number of times patients had to return to the clinical center for preoperative exams		
1 to 3 times	138	92
3 to 5 times	7	4.7
More than 5 times	5	3.3
Time elapsed between cataract diagnostic and surgery		
1 to 3 months	53	35.3
3 to 6 months	22	14.7
6 to 12 months	25	16.7
12 to 24 months	4	2.7
More than 24 months	46	30.7
In favor of having surgery on the same day of the diagnostic		
No	32	21.3
Yes	118	78.7
Justification		
Convenience	84	56
Preventing disease progression	7	4.7
Improving visual acuity	27	18
Fear of surgery	21	14
Time to perform preoperative exams	8	5.3
Indifferent	3	2

n = absolute frequency; % = relative frequency

were not economically active, as also observed in other studies. This information indicates significant lack of resources among the population assisted by public hospitals. [5]

According to Lima et al., [6] 86.1% of patients presented decreased visual acuity within less than 5 years and the mean time it took for them to get to the first ophthalmological consultation was 1.1 ± 0.1 months; these findings corroborate the ones in the current study.

In addition, decreased visual acuity leads to losses in the socioeconomic field, in mental health and in quality of life. Therefore, cataract leads patients to present work and social limitations, makes them increasingly dependent on others and insecure. [2,7,13,14] This information was confirmed in the current study, since 77.3% of patients did not live alone and 62.7% of them did not work; of these, 53.8% were already retired.

Nowadays, facectomy is one of the surgeries most often performed in the world. It is the only curative treatment for cataracts; besides, it is highly effective and presents favorable cost-benefit (approximately $ 230, with IOL implantation). [8,12] Patients' hard time to have access to the public health service was the main obstacle for the implementation of this treatment in the current study. According to the Brazilian Council of Ophthalmology, the number of cataract surgeries performed in Brazil is historically low. [2] This number increased from 90,000/year in the 1990s to 250,000/year in 2000. However, the need of conducting 450,000 surgeries/year in the 2000s had been already estimated to meet the national demand. [6]

According to estimates, approximately 350,000 individuals living in Brazil are blind due to cataract and the incidence of this disease increases by 20% in each observed prevalence year. [2] In addition, increased life expectancy among Brazilian individuals has increased the number of new cataract cases in the country; consequently, it increased the number of necessary facectomy procedures. [6-8]

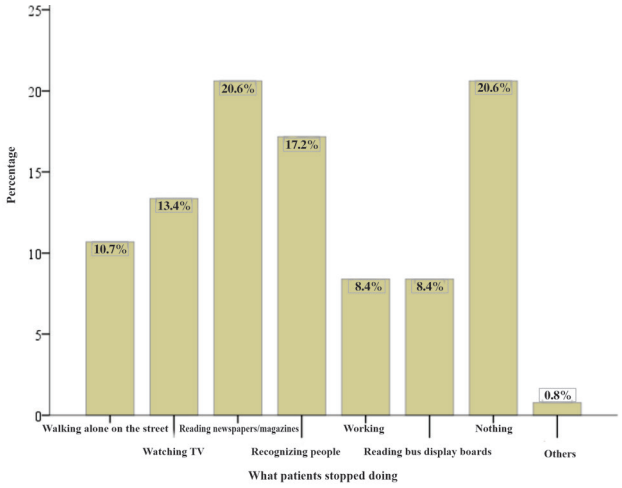

Figura 4: Distribuição do prejuízo nas atividades de vida diária dos pacientes

According to WHO, it is necessary performing at least 3,000 cataract surgeries/million inhabitants/year in a given region or country in order to eliminate senile cataract-associated blindness. [9] Brazil, which has approximately 202 million inhabitants, should guarantee 390 thousand SUS-funded cataract surgeries per year, since this health system is responsible for serving 65% of the population. [2] However, SUS remains unable to meet the national demand; thus, non-operated cases have been accumulating over the years. [6-8]

Lack of interest of most ophthalmologists to perform the procedure funded by SUS and, mainly, the quantitative restriction of surgeries imposed by health authorities due to limited financial resources are other factors leading to insufficient number of cataract surgeries in Brazil. According to estimates, given the current access-to-surgery model, 90% of individuals diagnosed with cataract-associated loss of visual acuity would not be rehabilitated and only 10% of them would undergo cataract surgery. [13]

Delay in seeking treatment can be explained by individual difficulties and/or by obstacles found in the health system itself. [13] Difficulty to have access to facectomy was the main factor pointed out by patients. [8] Other reasons comprised lack of patients' perception about visual loss, their belief that visual loss is a natural process associated with aging [2] and fear of surgery. [6]

In addition, lack of knowledge about eye surgery options [2] and of financial resources to perform all preoperative exams was also mentioned. [6,13] Thus, conducting screening and treatment campaigns and optimizing the surgical capacity of specialized services are essential strategies to counterbalance obstacles faced by patients to have access to SUS-funded cataract surgery. [8]

In addition, fear of surgery was another significant obstacle observed in the current study, a fact that indicated patients' lack of knowledge about the procedure. [6,9] Their anxiety towards the treatment lies on their fear of complications and blindness. [5] According to Kara-José and Temporini, 22% of patients expressed fear of surgery; 66% of these patients mentioned the likelihood of getting blind as the main cause of fear, which even overcame their fear of dying during the procedure. [2]

Populations' fear of surgery indicates deficiency in governmental education plans. The National Cataract Campaign was implemented in 1998; it was based on the Cataract Project and aimed at breaking down barriers faced by patients to have access to cataract treatment. The project covered educational programs

developed for the population; however, the Federal Government discontinued the transfer of funds and discouraged its execution in 2006.[8] Educational barriers can be overcome through actions aimed at spreading information about cataract features and about the importance of diagnosing and treating it. [13]

Lack of clinical condition was also evidenced as a factor making it hard for patients to have access to surgery. According to the last national study, this barrier led to the suspension of 4.50% of surgeries in the country. [15] According to the study by Magri et al., lack of clinical conditions was the main reason (86.9%) for canceling facectomy procedures. Unfavorable clinical conditions comprise decompensated or poorly controlled comorbidities such as diabetes and hypertension. [16]

A significant number of patients (78.7%) in the current study would agree with the possibility of having surgery on the same day as the diagnosis. Most of them said that the ease of immediate treatment was the reason to support such idea. Small and mid-sized outpatient surgeries decrease expenses with the surgical procedure and exempts patients from returning to the clinical center for exams and from waiting for surgery, which allows the population to have greater access to treatment. [6] Fear of surgery (65%) was the main reason for not undergoing facectomy right away among the 21.3% of patients who were against having surgery on the same day as the diagnosis; it was an obstacle to access to surgery.

Conclusion

Based on the present study, hard time to have access to specialized health system, fear of surgery and lack of clinical condition for surgical treatment were the main difficulties faced by patients in accessing senile cataract treatment. These obstacles result from SUS's deficiency in educating, diagnosing and treating the Brazilian population. Brazil has not been historically able to perform the number of cataract surgeries necessary to meet the national demand.

The aforementioned deficiency results from lack of knowledge about the disease and about the effectiveness of surgical treatment, a fact that scares the population. In addition, deficient government resources limit the number of facectomy procedures performed in the country.

Thus, it is necessary implementing projects focused on facilitating cataract diagnosis and treatment, on educating the population, on promoting population's awareness about the disease and on encouraging patients to seek treatment.

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Corresponding author:
Mariana Melo Soares
Rua T47, nº 355, Setor Oeste
E-mail: marianamelomed@gmail.com