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Frequency of Eye Diseases in Subjects Aged 40 and Over

Konaté Daouda[1], Yattara Maimouna[1], Dembélé Lucienne[1], Sall Fatou[2], Mariko Bréhima[3], Sogoba Sanata[4], Doumbia Daouda[1], Traoré Abdramane[1], Camara Claude Oumar Bernard[5], Kouma Aminata[1], Keita Koniba[1], Napo Abdoulaye[3], Sylla Fatoumata[3], Traoré Lamine[6]

[1]Bocar Sidy Sall University Hospital (CHU-BSS), Kati, Mali
[2]Sectorial Unit for the Fight against HIV/AIDS and Viral Hepatitis (CSLS-TBH), Bamako, Mali
[3]University Hospital Center, Institute of Tropical Ophthalmology of Africa (CHU-IOTA), Bamako, Mali
[4]Mali Hospital, Bamako, Mali
[5]International Ophthalmology Center of Mali (CIOM), Bamako, Mali
[6]National Eye Care Program, University of Bamako, Bamako, Mali
Email: daoudakonat14@yahoo.com

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Abstract

Although eye problems can occur at any age, they are often common from the age of 40. Eye diseases with a prevalence associated with age and aging will continue to increase in the coming years. Most studies conducted on problems in middle-aged people have focused on visual disorders without taking into account all the ocular morbidities that may affect this segment of the population, hence the present study, the aim of which is to determine the proportions of different eye diseases in people aged 40 and over. **Materials and Methods:** This was a descriptive cross-sectional study carried out in the ophthalmology department covering the period from January 1 to December 31, 2020. **Results:** In total, we collected 828 patients aged 40 and over out of 1811 patients who received ophthalmological consultation during the study period, representing 45.72%. The most represented age group was 40 - 50 years, with an average age of 58.84 years and a maximum of 93 years. There were slightly more women (62.3%) than men (37.7%). The main reasons for consultation were decreased visual acuity (26.4%) and pruritus (19.9%). The main eye diseases diagnosed were cataracts (23%), allergic conjunctivitis (21.1%), and bacterial conjunctivitis (14.2%). **Discussions:** The predominance of cataracts in the diagnosed diseases confirms the literature data, according to which the main eye morbidities in middle-aged and elderly people are cataracts, glaucoma, and age-related macular degeneration. **Conclusion:** It is crucial to have a mastery of these epidemiological data of eye diseases in order to adapt the technical platforms of eye care structures to the needs of different segments of

the population.

Keywords

Frequency, Eye, Disease, Middle, Aged, Elderly, People

1. Introduction

The eye, like all sense organs, has an inestimable importance in maintaining and improving a person's quality of life. Although eye problems can occur at any age, they are often common from the age of 40. According to the literature, eye diseases with a prevalence associated with age and aging will continue to increase in the coming years, thus constituting a public health problem [1]. Almost all surveys on eye diseases related to maturation have concerned visual disorders and their causes without taking the problem into account more broadly [2]-[11]. Some so-called trivial conditions can have very serious consequences on the eye during their development. It is in this context and given the lack of overall data relating to eye diseases from a certain age that we initiated this study, the aim of which is to determine the proportions of different eye pathologies in people aged 40 and over.

2. Materials and Methods

Study setting: The study was carried out at the Bocar Sidi Sall University Hospital in Kati, which has a 2nd level ophthalmology center.

Type and period of study: We carried out a quantitative, cross-sectional, descriptive study covering the period from January 1 to December 31, 2020.

Study population and selection criteria and information collection:

The sampling involved all patients aged 40 and over who consulted during the study period and gave their consent to participate in the survey. Patients under 40 years of age and those aged 40 and over who did not consent to participate in the study were excluded. Information on patients was collected on a pre-established survey form, including sociodemographic parameters and clinical parameters, and validated by the ethics committee of the study framework.

Ophthalmological examination

All patients underwent a complete ophthalmological examination based on the measurement of distance acuity assessed on the Snellen optotype scale, the state of the anterior segment, and the posterior segment on slit lamp examination.

Case definition:

The analysis of the diagnosed pathologies was exhaustive. That is to say, the study took into account all ocular pathologies, from the most trivial to the most serious.

Variables studied, Data entry and analysis:

The variables studied were age, sex, medical-surgical history, ophthalmological history, reason for consultation, and diagnosed ocular pathology. Data entry,

processing, and analysis were done using Word and SPSS 25 software. Proportions were expressed in absolute or relative values.

3. Results

During the study period, we collected 828 patients aged 40 and over from 1.811 new consultations, representing 45.72% of the patients examined. The most represented age groups were 40 - 50 years and 61 - 70 years, respectively, with a frequency of 31.5% and 28.4% (Table 1). The female gender was the majority, with 62.3% (Table 1). The medical and surgical history was dominated by diabetes and high blood pressure, with 3.7% and 2.8% frequency, respectively (Table 2). The ophthalmological history was dominated by cataract surgery with a frequency of 3.9% (Table 2). Decreased visual acuity and pruritus were the most frequently mentioned reasons for consultations, with 26.4% and 19.9% frequency, respectively (Table 3). The pathologies diagnosed were dominated by cataracts, allergic conjunctivitis, and bacterial conjunctivitis, with 23%, 21.1%, and 14.2%, respectively (Table 4).

3.1. Sociodemographic Characteristics

Table 1. Distribution of patients by age and gender.

	n	%
Age group		
40 - 50	261	31.5
51 - 60	190	22.9
61 - 70	235	28.4
71 - 80	108	13
81+	34	4.1
Sex		
Femme	516	62.3
Homme	312	37.7

3.2. Clinical Characteristics

Table 2. Distribution of patients according to medical-surgical and ophthalmological history.

Background	n	%
Medical and surgical history		
Stroke	1	0.1
Diabetes	31	3.7
Sickle cell disease	2	0.2
High blood pressure	23	2.8

Continued

None	771	93.1
Ophthalmological history		
Cataract surgery	33	3.9
Wearing corrective lenses	6	0.7
Eye trauma	16	1.9
None	773	93

Table 3. Distribution of patients according to the reason for consultation.

Reason for consultation	n	%
Decreased visual acuity	219	26.4
Diabetes assessment	29	3.5
Sickle cell assessment	2	0.2
High blood pressure assessment	16	1.9
Glaucoma screening	1	0.1
Eyelid droop	1	0.1
Eye pain	69	8.3
Visual blur	97	11.7
Tearing	1	0.1
Photophobia	1	0.1
Itching	165	19.9
Eye redness	22	2.7
Secretion	113	13.6
Foreign body sensation	8	1
Glaucoma monitoring	81	9.8
Eyelid swelling	3	0.4
Total	828	100

Table 4. Distribution of patients according to the pathology diagnosed.

Diagnosed pathologies	n	%
Ametropia	89	10.7
Cataract	191	23
Traumatic CE	3	0.4
Chalazion	3	0.4
Allergic conjunctivitis	175	21.1
Bacterial conjunctivitis 10.1	118	14.2
Contusion	1	0.1

Continued

Bietti's dystrophy 10.1	2	0.2
Endophthalmitis	1	0.1
Neovascular glaucoma	1	0.1
Chronic glaucoma	101	12.2
Subconjunctival hemorrhage	3	0.4
Conjunctival irritation	29	3.5
Keratitis	15	1.8
Branch retinal vein occlusion	1	0.1
Post-surgical corneal edema	2	0.2
Paralysis of the third nerve	1	0.1
Pterygium	38	4.6
Ptosis	1	0.1
Acute anterior uveitis	4	0.5
Posterior uveitis	1	0.1
Retinitis pigmentosa	1	0.1
Hypertensive retinopathy stage 3	1	0.1
Aucun	46	5.6
Total	**828**	**100**

4. Discussions

4.1 Epidemiology

The monocentric nature and the lack of similar comparative work could constitute the limits of this study, which examined the epidemiological characteristics and the proportions of the different eye conditions encountered in people aged 40 years or older. However, the results obtained deserve to be commented on despite the laborious discussion. In total, there were 1811 patients who presented for consultation. Within this number, 828 were aged 40 and over, representing a frequency of 45.70% of the study population.

4.2. Distribution of Patients as Follows

4.2.1. Age

In our series, the most represented age group was that of 40-50 years with a frequency of 31.5% (n = 261), followed by that of 61-70 years with 28.4% (n = 235). Older people were less represented. This under-representation of very elderly subjects would be linked to the limited life expectancy in our countries in developing countries.

4.2.2. Sex

In this study, women were predominantly represented with a frequency of 62.3%

(n = 516) against 37.7% (n = 312) for men and a sex ratio F/M of 1.65. This result is consistent with that obtained in Ghana [12]. On the other hand, another study reported that men were more numerous than women in attending eye care services [13].

4.3. Clinical Aspect

4.3.1. Medical-Surgical and Ophthalmological History

Most of the patients received had no medical-surgical history, *i.e.*, 93.1% (n = 771). However, the medical history found was dominated by diabetes with 3.7% (n = 31), followed by high blood pressure with 2.8% (n = 23). The ophthalmological history found was dominated by cataract surgery with 3.9% (n = 33) and eye trauma with 1.9% (n = 16).

This history may be underestimated because, in practice, it is not clearly defined at the consultation.

4.3.2. Reason for Consultation

The predominant symptom was decreased visual acuity with 26.4% (n = 219), followed by pruritus with 19.9% (n = 165), and secretions with a frequency of 13.6% (n = 113). This result denotes the disparity of reasons for consultation among patients received in ophthalmology.

4.3.3. Diagnosed Pathologies

The main pathologies diagnosed were dominated by cataract, allergic conjunctivitis, and bacterial conjunctivitis, with respectively 23% (n = 191), 21.1% (n = 175), and 14.2% (n = 118). This result corroborates those of many surveys which reported that the main age-related ocular pathology is cataract [2] [3] [5] [9].

In Cameroon, posterior segment diseases were mainly reported with a frequency of 29% [8]. In Iceland, age-related macular degeneration was reported as the major morbidity in subjects aged 50 years and over [6].

5. Conclusion

This study gives us an estimate of the different pathological proportions encountered in people aged 40 and over. It emerges that the most common morbidities are cataracts and conjunctivitis, with a predilection for the female sex. It is crucial to have control over these data in order to adapt the technical platforms of eye care structures to the needs of the different segments of the population.

Conflicts of Interest

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

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