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RESEARCH ARTICLE

CARTOGRAPHY OF OCULAR DISEASES IN OYO DURING A FREE EYE CARE PROGRAM

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ABSTRACT

We present the most common ocular diseases during a free eye care program. **Patients and Methods:** It is a descriptive cross-sectional study carried out in the city of Oyo, over two months, from July 1 to August 31, 2018. After registration, patients underwent a complete ophthalmological examination. Patients with cataract and pterygium underwent surgery. Parameter analyzed: Age, sex, pathology presented by the patient. The data analysis was carried out with epi-info software 7. **Results:** 4472 patients were included during the study period, including 1714 men and 2758 women, a sex ratio of 0.62. The age group 60 years and older was the most represented with 29.40% of patients. 20.5% of the patients came from places that are 408km away from the examination site. There were also patients who came from almost 1000km. 51.25% of patients had conjunctivitis and 20.61% had cataracts. Conjunctivitis was predominant in younger subjects, while cataracts and glaucoma were more common in subjects over 60 years of age. **Conclusion:** These are the most common ocular disease usually encountered in ophthalmic consultation with varying frequencies depending on the study protocols.

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INTRODUCTION

Blindness is a public health problem. Recently, the WHO Global action plan 2014-2019 [1] has provided an update approach with emphasis on universal eye health coverage. In developing countries, most health centers are centralized in big cities, making it difficult for unprivileged people to benefit adequate care, such as poor people, people living in rural areas [2]. The best way to address this is to establish sustainable eye health facilities. Meanwhile, we continue to use advanced strategies [2]. In addition to the care provided, these strategies should also help to obtain the factual data necessary for the better management of eye health services. This study aims to present the most common ocular diseases encountered during an advanced strategy.

PATIENTS AND METHODS

It is a descriptive cross-sectional study carried out in the city of Oyo in Congo Brazzaville, as part of a free eye care program in a mobile clinic.

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Duration of the study: two months, from July 1st to August 31st 2018. Technical team: Our team consisted of two ophthalmologists, 5 senior ophthalmic technicians (SOT), a nurse and 2 computer analysts.

Ophthalmological material included

- Visual Acuity Scales printed on a Cardboard and mounted on a wall
- An auto-refractometer for screening ametropia
- 5 sets of test lenses
- 5 Ophthalmoscopes
- Two slit lamps with Goldman applanation tonometer
- Two 90 diopters examination lenses

Conduct of the examination: Patients were first registered with the computer analyst who drew up a consultation sheet, then the patient was seen by an SOT who eliminated conjunctivitis and ametropia. Other ocular diseases were checked by an ophthalmologist. Patients with cataract and pterygium underwent surgery during the study. The following were included in this study: all patients who attended the ophthalmology department of the mobile clinic. Parameter analyzed: Age, sex, disease presented by the patient. The data analysis was carried out with epi-info software 7.

RESULTS

4472 patients were examined during the study period, including 1714 men and 2758 women, a sex ratio of 0.62. The age group 60 years and older accounted for 29.40% of patients. 20.5% of the patients came from places that are 408km away from the examination site. There were also patients who came from almost 1000km. More than 20% of patients had cataracts. Conjunctivitis was predominant in younger subjects, while cataracts and glaucoma were more common in subjects over 60 years of age.

Table 1. Distribution of patients by age group

Age groups	Frequency	%
0 to 15 years old	950	21,24
16 to 39 years old	1319	29,49
40 to 59 years old	888	19,85
Over 60 years old	1315	29,40
Total	4472	100

Table 2. Distance from the patient's place of origin to the examination site

Distance	Frequency	%
OYO (0 km)	1966	43,96%
Brazzaville 408	917	20,5%
Ollombo 9km	408	9,12%
Owando 90 km	171	3,82%
Gamboma 255km	152	3,39%
Others	858	19,18%
Total	4472	100%

Table 3. Most common diseases

Most common diseases	Number of patients	%
Conjunctivitis	2292	51,25
Cataract	922	20,61
Ametropia	536	11,98
Pterygium	303	6,77
Glaucoma	232	5,18
Others	187	4,18
Total	4472	100

Table 4. Distribution of pathologies in relation to age

Pathologies	Age				Total
	0 à 15 years old	16 à 39 years old	40 à 59 years old	Over 60 years old	
Conjunctivitis	808 (35,25%)	921 (40,18%)	375 (16,36%)	188 (8,20%)	2292
Cataract	7 (0,75%)	21 (2,27%)	96 (10,41%)	798 (86,55%)	922
Ametropia	98 (18,28%)	169 (31,52%)	175 (32,64%)	94 (17,53%)	536
Pterygium	0(0%)	129 (42,57%)	139 (45,87%)	35 (11,55%)	303
Glaucoma	0(0%)	39 (16,81%)	53 (22,84%)	140(60,34%)	232
Total	913	1279	838	1255	

DISCUSSION

Of the 4472 patients received 2758 were female and 1714 male was a sex ratio of 0.62. This female predominance has been found in other advanced free eye care strategies [3]. Free medical care has attracted patients from all over the country, some coming from places as far as to 1000 km. Apart from Oyo patients who represented the largest number, the second largest group came from Brazzaville more than 400km away, although this city has quality eye care centers. This justifies the place of the financial obstacle to eye care [4,5], but also ignorance [5,6], especially since travel and stay for some patients were more expensive than the value of the care received. The patients were divided by age group, and the frequencies of ocular diseases varied according to age groups.

The most common disease was conjunctivitis with more than 50% of cases, followed by cataracts. The diagnosis of allergic conjunctivitis was more symptomatic; some patients simulated it to benefit free eye drops, which justifies a slightly higher prevalence of this disease compared to data from the literature. Cataract was the second most common ocular disease. Cataract is the leading cause of blindness in the world with a higher incidence in Africa where the cataract surgery rate, which is the number of cataracts to be operated per million inhabitants per year, is never reached [7]. Thus the place of cataracts is among the leading motives of consultation in ophthalmology; In second place in Ghana as in our study [8], it was the leading cause of consultation in Nigeria [9]. Glaucoma, responsible for irreversible blindness was the 5th leading cause of consultation in our study.

Patient with pterygium, usually responsible for irritative symptoms, also underwent surgery during the activity, which may explain its relatively high frequency. Refractive errors, a very common motive of consultation, accounted for only 12% of cases in our studies. Kassir [10] suggests an immediate orientation of patients by the first cases received, on the available care package. In our case the patients were mostly addressed for the cataract surgery which was free than an optical correction, the distribution of the glasses not being in our objectives. Regarding age groups, conjunctivitis and ametropia were the predominant ocular diseases between 1 and 15 years. Conjunctivitis was also the predominant ocular disease in children younger than 10 years old in Agyemang [8] in Ghana, but less predominant in a study conducted by Ombwa [11] in Cameroon in children aged 6 to 15 where he noted a predominance of ametropia (43.1%) followed by conjunctivitis (33%). In our study, conjunctivitis was still the most frequent ocular disease from 16 to 59 years old, but in a less important way. From age 60 and above, the most common ocular disease was cataract.

Each ocular disease had a particular evolution curve

- Conjunctivitis, more frequent in young people, decrease gradually with age.
- Cataract, rare in young people, evolve with age to become the predominant ocular disease after 60 years
- Ametropia and pterygium are most common between 15 and 59 years
- Glaucoma follows the pace of cataracts with a lower frequency.

Conclusion

Conjunctivitis was the most common ocular disease in Oyo, during in the context of free eye care. Blinding pathologies were dominated by cataract with 20.6% of cases. Glaucoma affected 5.18% of the patients examined. These ocular diseases are usually encountered during ophthalmological consultation with varying frequencies depending on study protocols.

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