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Epidemioclinic Cataract in Children 0 to 15 Years: Case of the Saint Yvonne Ophthalmic Clinic in Lubumbashi / DRC

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Abstract

Introduction: Cataract is the opacification of the lens that can cause reversible blindness or not. The purpose of this work was to describe the epidemiological and clinical profile of cataract in children in the city of Lubumbashi.

Method: This is a cross-sectional descriptive study with retrospective data collection. Included in this study were the medical records of patients aged 0 to 15 years old, having consulted at the St. Yvonne Ophthalmology Clinic during the period from January 01, 2012 to December 31, 2016; and in whom the diagnosis of cataract was retained. The study variables were: patient age, gender, origin, type of cataract, location of opacities, laterality, time to view, compliance with treatment, and type of treatment.

Results: Of a total of 15696 medical records compiled, cataract was diagnosed in 392 children, a prevalence of 2.5% of cases, making a total of 553 eyes with cataracts. The average age of patients was 6.4-4.5 years, with a male predominance of 64.45%. Among them, 43.04% of patients were aged between 0 and 5 years. Cataract was congenital in 42.53% of eyes; she was traumatic in 26.47% of eyes; infantile cataract was retained in 17.65% of eyes. The crystalline opacities were either total or cortical or nuclear with respectively 54.45%, 28.68%, 7.07% of eyes. Cataract was bilateral in 57.1% of cases, 49, 55% of right eyes and 50.45% of left eyes. In our series, the average consultation time was 31.28 ± 30 months, non-compliance with treatment was observed in 13% of patients and surgical treatment was performed in 75% of eyes.

Conclusion: This study revealed that the cataract of the child is a real visual health problem, in the city of Lubumbashi, requiring a good awareness campaign of the parents, an early diagnosis and an adequate management in order to avoid the occurrence of low vision and blindness.

Keywords: Epidemiology; Cataract; Child

Introduction

Cataract is an eye condition caused by the presence of opacity in the lens, normally transparent. The latter is used for the development of images on the retina from which the presence of opacities within it is responsible for visual disorders, low vision and blindness [1]. The hypotheses implicated in the pathogenesis of opacification are either protein denaturation or an alteration of the fibers, or even a superior migration of epithelial cells [2]. In children, the authors evoke genetic predisposition, embryopathies, trauma, and endo-ocular diseases greatly influence its development [3].

Cataract is manifested by leucocoria, photophobia, visual disturbances in older children, or strabismus or nystagmus. It is confirmed by a specialized examination after dilation of the pupil, with the flashlight but better with the slit lamp not to be confused with retinoblastoma, a retinal detachment or a Coats disease [4,5].

The early diagnosis and the complete and timely management by a surgical intervention makes it possible to prevent the

occurrence of an amblyopia Mergier [6]. In some cases, optical treatment and orthoptic monitoring are often recommended to ensure visual recovery for the child [7,8]. In Africa, an estimated 20 to 100 children with cataracts per million populations per year [9]. In our community, no work has been done on this subject and our study aims to reveal the epidemiological and clinical aspects of cataract of the child aged 0 to 15 in the city of Lubumbashi

Method

This study was conducted in Lubumbashi (DR Congo) at the Saint Yvonne ophthalmic clinic. This is a cross-sectional descriptive study with retrospective collection of data from patients consulted during the period from 01 January 2012 to 31 December 2016, i.e., a period of 5 years. Our study population consisted of children aged 0 to 15 years, we compiled the medical records of 15696 children of whom 392 were included according to the following criteria: The presence of cataract, being 0 to 15 years old and having consulted during the period of our study. Of the selected group 51 of them did not consent to the proposed treatment. To collect the data, we used the following variables: age, gender, provenance, complaints, consultation time, types of cataracts, location of opacities, treatment received. The result analysis was done using the Excel 2007 and Epi Info 7 software. The results were presented as text, figure and table. We used the usual statistical tests for the interpretation of the results, it is the percentage, the sex ratio, the average and the standard deviation, the median and the mode (Table 1).

Results

The Figure 1 below shows a prevalence of cataract of 2.5% (392 children) out of a total of 15696 children (100%).

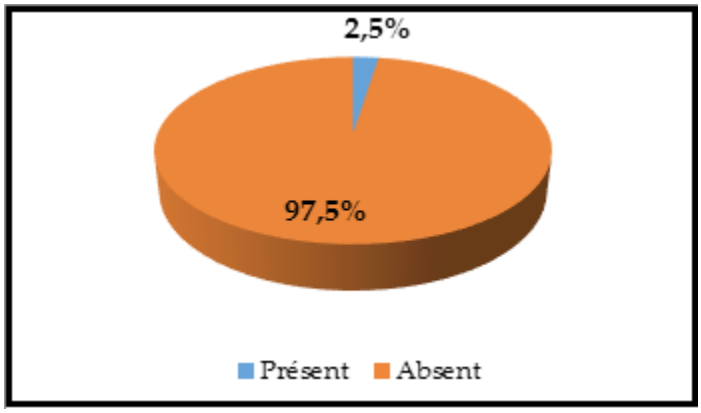

Figure 1: Prevalence of cataracts.

Age groups (years)	Numbers	%
0-5	175	44.64
6-10	119	30.36
11-15	98	25.00
Total	392	100.00

Table 1. Distribution of patients by age.

This Table 2 shows a predominance of patients aged less than or equal to 5 years (175 out of 392 patients or 44.64%), followed by those aged between 6 and 10 years (119 out of 391 patients or 30 patients). 43%); those aged between 11 and 15 years were represented at 25.06% (98 out of 392 patients). The average age was 6.7 years.

Consultation time										
Commune of Origin	**0-60 month**	**%**	**61-120 month**	**%**	**121-180 month**	**%**	**Unknown**	**%**	**Total**	**%**
Annex	81	20.66	12	3.06	0	0.00	19	4.85	112	28.57
Kampemba	30	7.65	5	1.28	3	0.77	4	1.02	42	10.71
Katuba	53	13.52	6	1.53	0	0.00	7	1.79	66	16.84
Cameldo	4	1.02	0	0.00	1	0.26	1	0.26	6	5.61
Kenya	20	5.10	0	0.00	0	0.00	2	0.51	22	5.61
Lubumbashi	36	9.18	6	1.53	4	1.02	11	2.81	57	14.54
Soar	23	5.87	3	0.77	1	0.26	5	1.28	32	8.16

Other	43	10.97	6	1.53	1	0.26	5	1.28	55	10.03
Total	290	73.98	38	9.69	10	2.55	54	13.78	392	100.00

Table 2: Distribution of patients by source and consultation time.

The Table 3 shows that 28.57% of the patients came from the outlying commune, 16.84% from the Katuba commune and 1.53% from the Kamalondo commune. Taking into account the consultation period, the average consultation time was 31.28 ± 30 months.

antecedents	Effective	%
No	225	57.40
Growth retardation	3	0.77
Rubella	3	0.77
Infections during pregnancy	1	0.25
microphthalmos	2	0.51
Glaucoma	1	0.25
Polymalformative Syndrome	1	0.25
Trauma	115	29.34
Previous surgery	40	10.20
Marfan Syndrome	1	0.25
Total	**392**	**100.00**

Table 3: Patient Distribution by History.

From this chart, 57.40% of patients with no reported history were identified; 29.34% had a history of trauma; 10.20% had a history of previous surgery (Table 4).

Laterality	Sex				Total	
	Male		FeMale			
	Effective	%	Effective	%	Effective	%
OD	88	15.91	34	6.15	122	22.06
OG	71	12.84	44	7.96	115	20.80
ODG	96	17.36	62	11.21	316	57.14
Total	**351**	**46.11**	**202**	**25.32**	**553**	**100.00**

Table 4: Distribution of patients according to the laterality and sex.

The Table 5 above shows that the cataract was unilateral in 40.86% of cases including 22.06% on the right side and 20.80% on the left side. Bilateral cataract was present in 57.14% of cases. The predominance was masculine, 64.45% of the cases.

	Location of Opacities					
Cataract	**Total**	**capsular**	**cortical**	**Nuclear**	**Total**	**%**
Congenital	128	6	74	30	238	43.04
Traumatic	96	1	18	0	115	20.80
Infantile	52	5	45	9	111	20.61
Complicated	22	5	19	0	46	8.32
Secondary	0	43	0	0	43	7.23
Total	**298 (53.9%)**	**60 (10.8%)**	**156 (28.2%)**	**39 (7.1%)**	**553 (100.0%)**	**100.00**

Table 5: Distribution of patients according to opacities according to the type of cataract.

With respect to this table, total opacities were present in 53.9% of cataracts, followed by cortical opacities in 28.2% of cataracts and nuclear was the least numerous in 7.1% of cataracts.

Effective	**Support**	**%**
Refusal	51	13.01
medical	34	8.67
expectation	13	3.32
surgical	294	75.00
Total	**392**	**100.00**

Table 6: Distribution of patients according to care.

This Table 6 shows that 86.22% of the patients were operated on, 9.97% received medical treatment and only 3.81% of the patients had no treatment.

Discussion

Figure 1 has shown that the frequency of cataract is 2.5% this figure is close to that of observed in the world in general. Gyawali went to him to find 19.7% in Eritrea the probability that a weak sample could explain this difference in numbers [10,11].

From Table 1, 44.64% of the patients were aged 0 to 5 years' old this could be related to the fact that the little boys are more turbulent than the girls the average age in our study was 6.7 years with a male predominance. This is similar to the Randrianotahina HC study in Madagascar, which found an average age of 6.9 years [12]. Gogate and All found him 3 years old [13] Umar in Nigeria 6.88 years, Umar [14] and Kinori in Ethiopia found him 8.6 years Kinori [15]. However, Gilbert CE has found a male predominance of 36.5% girl, Gogate R [13] 52% male this male predominance may be due to the privilege of boys compared to girls in developing countries [16].

The analysis of Table 2 in the distribution of patients according to their origin and the consultation period showed that the adjoining commune which surrounds the whole city was the one from which the patients came from at 28.57%, followed by the one in Katuba where the hospital is located at 16.84% the average consultation time was 31 months. We attribute this delay of consultation to the organization of the sanitary system of the place that has not yet integrated ophthalmology into the primary health care or the patients closest to the health facility are those which directs the most and those located in the remote areas of the hospital are the many fewer come later [16].

Table 4 shows the distribution of the patients according to the antecedents to 57.4% of the patients is reported no antecedent is 81.2% of the non-traumatic cataract. This result confirms the literature that says that the mechanism of cataract development is still poorly understood and that the influence of maternal infection during pregnancy is the most known factor until now, but represents only a small percentage (0.25%) in the occurrence of cataract in children [4].

From Table 5 unilateral cataracts were present on the right at about 51% of unilateral cataracts. This figure is similar to that of Umar in Nigeria who found 52.5% of his eyes right [14].

Table 6 analysis to show that the type of congenital cataracts dominated at 43.04% followed by traumatic cataract at 20.8% Umar in Nigeria to find 62% of congenital cataract and SAA found 12% of traumatic cataract. The location of the opacities was total in 53.9% of cataract it means that the consultation is late [14,17].

In view of table, the surgical management of patients was 75% or 86.99% of compliant patients and Umar in Nigeria observed 84.3% of those who showed that the obstacle due to belief not yet fully lifted [14,18].

Conclusion

At the end of our work, we remember that cataract in children is a real visual health problem in the city of Lubumbashi. It requires a good awareness campaign of parents, early diagnosis and adequate care to avoid the occurrence of low vision and blindness.

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