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SERVICES FOR SCIENCE AND EDUCATION

Epidemioclinical, Therapeutic and Prognostic Features of Tropical Endemic Limbo-Conjunctivitis (TELC) at the Yopougon University Hospital: A Report About 150 Cases Collected

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ABSTRACT

Introduction: Tropical Endemic Limbo-Conjunctivitis is a common and chronic affection of the subject of less than 15 years, which results in the inflammation of the conjunctiva and the limbus with the possibility of extension to the cornea in its advanced forms. The objective of our study was to determine the epidemioclinical and therapeutic features of this affection and to assess its visual functional prognosis. Patients and Methods: This was a retrospective study that was carried out in the Ophthalmology department of the Yopougon University Hospital from July 2021 to September 2021. It focussed on 150 cases of Tropical endemic Limbo-Conjunctivitis which received treatment. We analysed the epidemioclinical, therapeutic and prognostic features from medical records. Results: The average age of our patients was 5.22 years with extremes of 7 months and 12 years. The male gender predominated with a sex ratio of 1.53. Our patients were in the majority of cases subject to multi-allergic manifestations (asthma, rhinitis, atopic dermatitis). Stage I of the Diallo classification was the most common clinical form in consultation. The treatment most often associated ocular washing with a topical antihistamine and/or antibiocorticoid. The outcome was marked by a remission in the majority of cases with however cases of recurrence occurring at variable times.

Discussion: Limbo-conjunctivitis is an allergic pathology which mainly affects male subjects in a hot and dry environment. It is common in children under five years and regresses with age. Conclusion: Tropical Endemic Limbo-Conjunctivitis is certainly a common condition but has a good prognosis. However, in some cases, recurrence of manifestations can lead to complications that can impair visual function.

Keywords: Limbo-conjunctivitis, endemic, Yopougon, allergic manifestations.

INTRODUCTION

Tropical limbo-conjunctivitis (TELC) is a very common condition in children aged 0 to 15 years[1], particularly in tropical environments as described by Diallo[2]. Eye diseases in children are a real public health problem not only because of the direct handicap they can cause, but also because of the psycho-emotional repercussions associated with them. The World Health Organization (WHO) estimates the prevalence of blindness in children at 0.3 per 1000[3]. Many causes of childhood blindness are in fact avoidable, prevented or treated. Children in the age group of 6 to 15 years are mostly educated and eye pathologies that have gone unnoticed or neglected can be a source of poor school results and compromise their future. Limbo-conjunctivitis is not a condition free from complications, hence the possibility of impairing visual function.

These motivations prompted the realization of this study whose objective was to assess the epidemiological, clinical, therapeutic and prognostic features of TELC in children aged 0 to 15 years.

PATIENTS AND METHODS

This was a prospective, descriptive and analytical cross-sectional study over a period of 3 months (from July 1 to September 31, 2015) which was carried out in the Ophthalmology Department of the Yopougon University Hospital. It focussed on 150 patients with limbo-conjunctivitis seen in consultation during this period. All patients over 15 years of age with other types of damage were excluded from our study. All our patients benefited from a complete ophthalmological consultation. The parameters studied were age, gender, personal allergic history, visual acuity, clinical stage of TELC according to the Diallo classification, type of treatment and evolutionary modalities. For the processing of our data, we used the software Epi info version 6.0. The statistical analysis of our results was done by the KHI 2 test at the significance level $\alpha = 5\%$.

RESULTS

During this study period, we received 2010 patients, 150 of whom presented with TELC, that is a hospital prevalence of 7.46%. The average age of our patients was 5.22 years with extremes of 7 months and 12 years. The age group from 2 to 6 years was the most affected by the condition with a proportion of 53% (Table I).

Table I: Distribution of our patients according to age groups.

Age groups	Numbers (n)	Percentage (%)
< 2 years	7	5
2 to 6 years	**83**	**53**
6 to 15 years	63	42
Total	150	100

The male gender was predominant (60%) and the sex ratio was 1.53 (Figure 1).

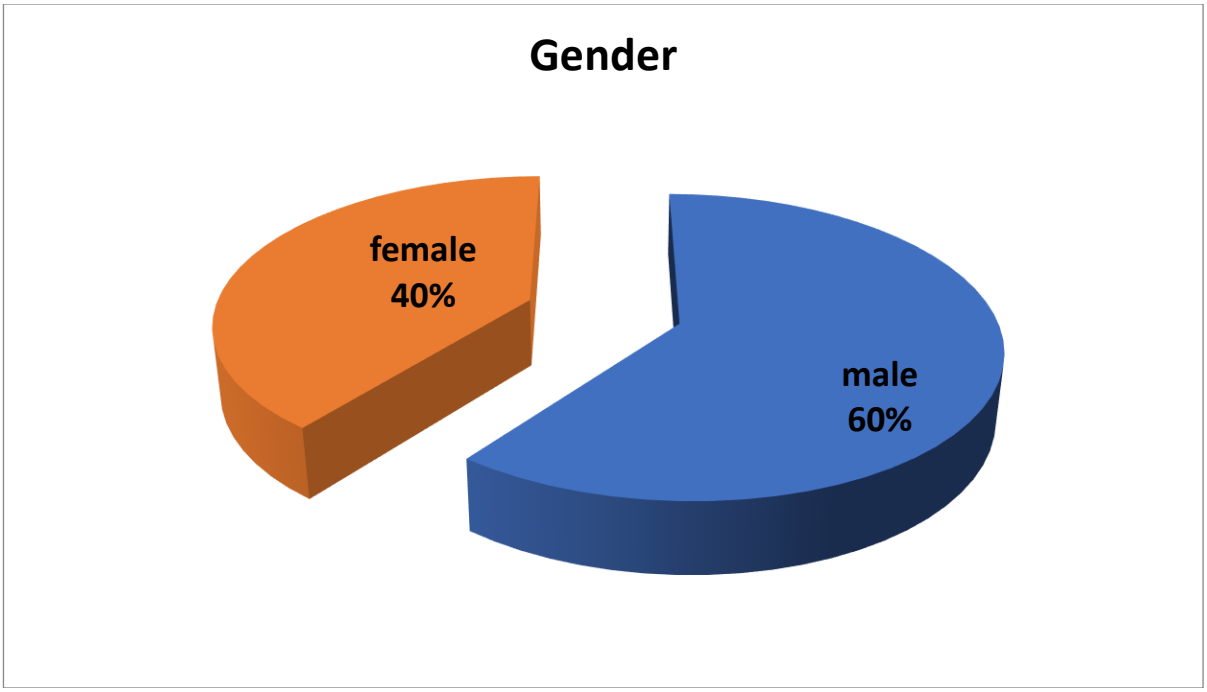


Figure 1: Distribution of our patients by gender.

We found in our study population more children of primary school level with a proportion of 41%, followed by out-of-school patients in 25% and those in kindergarten in 22%. Asthma, allergic rhinitis and atopic dermatitis were the most frequently found allergic conditions in the history of our patients with 4.66%, 76.7% and 4% respectively (Table II).

Table II: Distribution of our patients according to the type(s) of allergen(s).

Personal history	Numbers (n)	Percentage (%)
Asthma	**7**	**4.66**
Allergic rhinitis	**115**	**76.7**
Atopic dermatitis	**6**	**4**
Food allergy	4	2.66
Drug allergy	4	2.66
Multi-allergic	6	4
None	8	5.33
Total	150	100

The majority of our patients had either visual acuity > 3/10th (56%), or visual acuity not assessed due to age (preverbal age) with a proportion of 41%. Clinically, the main physical signs were conjunctival hyperaemia, limbitis and the presence of papillae and/or follicles (Figure 2).

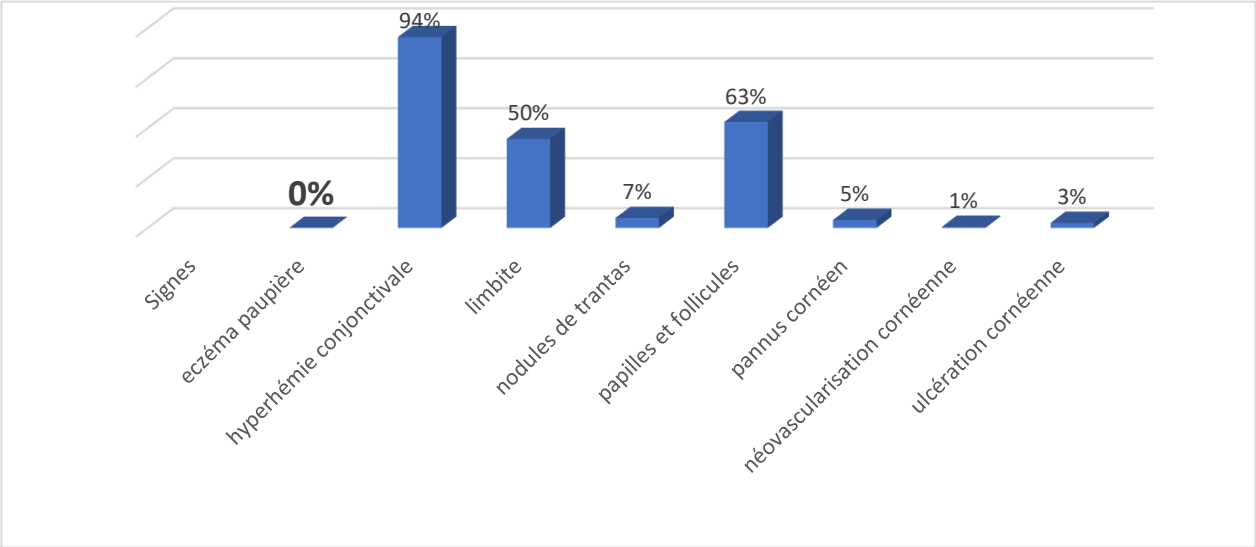


Figure 2: Distribution of our patients according to clinical manifestations.

Stages I and II of the Diallo classification were more commonly observed with respective proportions of 67% and 27%. Several therapeutic protocols had been instituted, but the main one most often combined eyewash, an antiallergic agent and an **antibiocorticoid** used locally and an antihistamine used systemically (Table III).

Table III: Distribution of our patients according to the types of treatment.

Treatment	Numbers (n)	Percentage (%)
Antiallergic	**147**	**46.81**
Antibiocorticoid	**125**	**39.81**
eyewash	**36**	**11.46**
Artificial tears	04	1.27
Corneal scarring	02	0.63
Total	150	100

At the evolutionary level, the prognosis was generally good with 123 patients experiencing no complications. It should be noted, however, that our study recorded cases of recurrence (29 cases), transition to chronicity (14 cases) and appearance or intensification of pre-existing complications with 26 cases (Table IV) and (Figure 3).

Table IV: Distribution of our patients according to evolutionary modalities.

Evolutionary modalities	Numbers (n)	Percentage (%)
Remission	**81**	**54**
Recurrences	**29**	**19.33**
Chronicity	**14**	**9.33**
Complications	26	17.33
Total	150	100

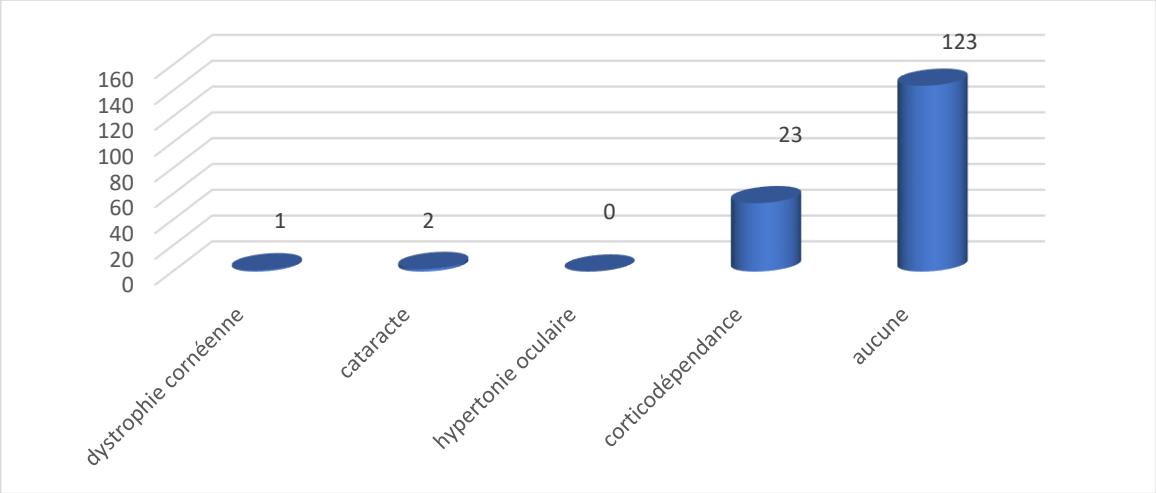


Figure 3: Distribution of our patients according to complications.

DISCUSSION

Tropical Endemic Limbo-Conjunctivitis (TELC) is an allergic keratoconjunctivitis that occurs in tropical environments[2]. It is characterized by a chronic and bilateral inflammation of the ocular surface with brown discoloration of the conjunctiva in the area of the palpebral cleft [2,4] TELC is common in children and generally regresses at the age of puberty[5, 6]. The average age of our patients was 5.22 years, lower than most series[7]. The male prevalence predominates in our study with 60% as in most series such as that of Diallo, Everearts and Doutetien. On the other hand, certain studies, in particular that of Cheng and al[8], have found an equality of proportion between both genders. It is a real public health problem; in fact, as in most studies, the most affected population was represented by children of school age, whether Kindergarten or primary, with more than 60% of our study population. This finding raises quite specific questions about the impact of this pathology on school performance. In Africa, TELC has a low seasonal variation and is present all year round with a slight peak in the heat season[9]. Its association with multi-allergic attacks is essential, indeed, in our series allergic rhinitis was the most common comorbidity factor in 77% of cases. Polysensitization is observed during TELC with a predominance of pneumallergens which have a per-annual effect[2, 10]. Like other studies, our study frequently found stages I and II, unlike Banla and al[6] who find stage II followed by stage III as the most commonly encountered stages. There is currently no reference therapeutic consensus for TELC[11], it must be adapted according to the individual. In our study, we adopted as treatment an eyewash associated with an antiallergic and/or an antibiocorticoid used locally and an antihistamine used systemically. Whatever the prescribed treatment regimen, it should be initiated promptly and the patient should be closely monitored in order to detect any

development of corneal complications. Our study recorded about 18% of cases of complication or aggravation of lesions. The prognosis for patients with TELC is generally good with resolution of the condition on treatment. However, this favourable development may be interspersed with complications estimated according to Bonini et al[12] in approximately 6% of patients who could present with visual loss due to corneal complications, in particular corneal scarring or keratoconus. The management of TELC, like all allergic conditions, must be associated with isolation of the allergen(s), advice for the avoidance of the allergen found and control of the domestic environment which can delay recurrences.

CONCLUSION

TELC is a particular form of allergic conjunctivitis in tropical environments. It is a common condition and is present all year round with peaks in the heat season. Atopic predisposition is a contributing factor. Allergy testing should be recommended in children with TELC with close acute attacks, even if complications are infrequent.

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