



# Epidemiology of Yaws in children aged 0-15 years in the Centre Region of Cameroon

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## BACKGROUND

Yaws is a neglected tropical disease which could lead to chronic dysfunction and disability when left untreated[1–3]. Approximately 75-80% of those affected are children under the age of 15 years and are the main reservoir of infection [1]. In the late 1970s, the re-emergence of yaws in many countries prompted a resolution of the World Health Assembly calling for the implementation of integrated treponematoses control programs [2].

All Cameroon was endemic for yaws in the 1950s. The eradication campaign conducted by WHO and UNICEF between 1952 and 1964 reduced the incidence of yaws by 93% and decreased its prevalence from 14% to 0.1% [3,4].

Yaws re-emerged in Cameroon in 2007 in Lomié Health District in the Eastern Region. The multiplicity of epidemics in Lomié and the neighboring health district has led to the reorganization of its control by the Ministry of Public Health through the National Committee to combat yaws, leishmaniasis, leprosy and Buruli in 2009[3,4]. An initial survey conducted in Lomié revealed a prevalence of 20.3% [3]. Between 2010 and 2012, the national program identified 25 other endemic health districts in the country[3,4]. Due to lack of appropriate resources, these surveys have been suspended and the situation in other health districts remains unknown[5].

## OBJECTIVE

The aim of this study was to determine the epidemiological profile of yaws in children aged from 0-15 years in the Centre Region of Cameroon.

## METHODS

On a cross-sectional study from December 2016 to January 2017, we recruited children from 0 to 15 years in five randomly selected health districts in the Centre Region of Cameroon. The sampling was simple and random. To carry out this study, we obtained an ethical clearance from the National Committee of Ethics and Research for Human Health in Cameroon (Reference n°2016/08/800/CE/CNERSH/SP). Before inclusion, legal tutors of children read and signed an informed consent sheet. The diagnosis of yaws was based on clinical lesions, confirmed by serological test. Statistical analyses were performed using the software Epi info 7.0. Quantitative variables were expressed as mean and standard deviation (SD), while qualitative variables were expressed as effectives and percentages.

## RESULTS

Overall 471 children (46% males) were enrolled from 10 communities (7 urban, 3 rural). The mean age was 6.37 ±2.54. The clinical prevalence of yaws was 3.2% (1.7% were boys and 1.5% were girls). 60% of affected children were aged 1 to 5 years and the rural community of Abem registered the highest number of cases (27%). The main clinical presentation were cutaneous ulcers (46%) and papilloma (40%), most of them localized on the head and/or neck (66%), the upper (56%) and lower (36%) limbs. 46% of children were in the primary stage, while 54% in the secondary stage. 25 (5.2%) children were tested positive for Yaws. Of them, 5 (1%) do not present clinical lesions and 5 (1%) were false positives (**Table**). 152 children including cases and contact were treated.

Table: Serological form of Yaws

Serology	Overall N=471	Clinical lesions	
		Presence (15)	Absence (456)
Positive, n (%)	20 (4.2)	15 (3.2)	5 (1%)
False positive, n (%)	6 (1.2)	0 (0)	6 (1.2)
Past or treated infection, n (%)	5 (1)	0 (0)	5 (1)
Negative, n (%)	440 (93.6)	0 (0)	440 (93.6)

## CONCLUSION

Yaws is endemic in the Centre region of Cameroon, particularly in rural areas. Preventive strategies and eradicating campaign has to be planned, to attempt WHO objectives by 2020.

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