

Echocardiographic screening of 4107 Nigerian school children for rheumatic heart disease.

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Abstract in **English**, French

OBJECTIVE: Echocardiographic screening for Rheumatic Heart Disease (RHD) in Africa has revealed prevalence rates in the range of 0.5-7.4%. There are no recent large population-based studies in Nigeria. The objective of the study was to determine the prevalence of RHD in a large sample of Nigerian school children.

METHODS: Using portable transthoracic echocardiography and auscultation, school children aged 5 years to 16 years in Lagos, Nigeria were screened for RHD. Diagnosis was based on the 2012 World Heart Federation echocardiographic criteria.

RESULTS: The 4107 children screened had mean age of 11.3 years (SD = 2.6) and 2206 (53.7%) were females. There were 38 children with abnormal echocardiograms, of which 11 (0.27%) showed RHD including two cases of definite RHD giving a prevalence of 2.7/1000 [2.9/1000 in the peri-urban, 2.4/1000 in the urban area). Echocardiography detected RHD 10 times better than auscultation [echocardiography 11 (0.27%) vs. auscultation 1 (0.02%);

P = 0.003]. The remaining 27 children with abnormal echocardiograms had congenital heart defects (CHD) giving a prevalence of 6.6/1000 for CHD, a yield higher than for RHD.

CONCLUSION: Prevalence of RHD among school children in Lagos, South West Nigeria is low compared to other African countries, possibly due to better access to medical care and antibiotic treatment for infections. Our data provides evidence that RHD prevalence may vary substantially within sub-Saharan Africa, necessitating targeted population-based sampling to better understand disease burden and distribution. Further work is needed to compare within- and between-country RHD prevalence as a basis for programme planning and control efforts.

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KEYWORDS: Critères de la Fédération Mondiale du Cœur; World Heart Federation criteria; cardiopathie rhumatismale au Nigeria; dépistage par échocardiographie; echocardiography screening; prevalence; prévalence; rheumatic heart disease in Nigeria; school children; écoliers

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