

PREVALENCE, TYPES AND ASSOCIATED FACTORS FOR SUBCLINICAL RHEUMATIC HEART DISEASE AMONG PRIMARY SCHOOL CHILDREN IN DAR ES SALAAM, TANZANIA

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BACKGROUND: Rheumatic heart disease (RHD) is the most common acquired heart disease occurring in children and adolescents. It is a result of repetitive heart valve damage by recurrent episodes of rheumatic fever preceded by infection with Group A beta haemolytic Streptococci (GAS) in childhood. Subclinical RHD is the presence of valvular lesion diagnosed by echocardiography in a person with no corresponding heart murmur, hence its detection helps in intervention for prevention of further valve damage.

OBJECTIVE: This study aimed at determining the prevalence, types and associated factors for subclinical RHD among primary school children in Dar Es Salaam, Tanzania.

METHODS: This was a cross-sectional descriptive community-based study which recruited primary school children from February to May 2019. A standardized structured questionnaire was used to collect data. Anthropometric measurements were taken and cardiac auscultation done. Echocardiographic screening was done to all study participants using a portable Siemens ACUSON P500, a 2D, continuous wave and color-Doppler ultrasound machine with a pediatric cardiac probe.

RESULTS: A total of 949 primary school children were enrolled with male to female ratio of 1:1.3. The prevalence of subclinical RHD was 3.4% with the mitral valve being the only valve involved. One child had clinically detected RHD and another child had a silent patent ductus arteriosus. The associated factors for subclinical RHD were older age of more than 9 years (OR 10.8, 95% CI 1.4-82.2, P=0.02) having three or more episodes of URTI in previous six months (OR 21, 95% CI 9.6-46, P=0.00) and poor hygiene (OR 3, 95% CI 1.3-6.8, P=0.009)

CONCLUSION AND RECOMMENDATION: Subclinical RHD is prevalent in primary school children in Dar Es Salaam. Further studies to assess the magnitude of this problem in the country are recommended. The proposed studies should also look at the possibility and feasibility of incorporating echocardiography into routine child health care especially for children above 9 years of age, for early detection of the disease and interventions to prevent its progression.

