

WORLD CONGRESS ON RHEUMATIC HEART DISEASE

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Title: PREVALENCE OF RHEUMATIC HEART DISEASES AMONG CHILDREN AND ADOLESCENTS IN SLUM SETTLEMENTS, IN RIVERS STATE

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Background & Aims: Background: Rheumatic heart disease is the most common cause of high morbidity worldwide among children and young adult. Hence, to identify the number of children and adolescents with rheumatic heart disease (RHD) which is the most common acquired heart disease in children and adolescent in slum settlement of Rivers State.

Methods: Methods: A cross-sectional study was undertaken between November 2022 and March 2023 among children and adolescents in selected slum/ squatter settlement of Rivers state in Nigeria. Data were collected through a self-administered questionnaire. Physical examinations, checking and measurements of vital signs with basic medical instruments. Participants were asked about cigarette smoking, alcohol use and levels of physical activity. Body weight, height, waist circumference, blood pressure and fasting blood glucose levels were measured. Hypertension, pre-hypertension, overweight and obesity were defined based on gender, age, and height from normative tables. Blood samples were obtained for rapid malaria test, fasting blood sugar. Throat swabs were taken for culture and sensitivity. Spirometry test and ECG were also conducted. Environmental factors and social amenities were also taken into consideration which includes living condition, type of house, number of children present and past medical history, etc.

Results: Results: Randomly selected children and young adult between 10 to 18 years of age were studied using stratified sampling. The target study sample was 450 with a population proportionate gender distribution (males 240, females 210). Coronary risk factors, anthropometric variables, blood pressure, ECG, Full blood count, malaria parasites. A total of 280 subjects (62.2%) (males 143, females 137) were examined. Full blood count samples were available in 131 males and 140 females. Overall coronary heart disease prevalence, diagnosed by history or ECG changes, was found in 28 males (6.22%) and 46 females (10.22%). Risk factor prevalence showed that smoking/tobacco use was present in 164 males (36.4%) and 7 females (1.5%). Obesity, body mass index ≥ 27 kg/m² was present, while truncal obesity (waist:hip >0.9 males, >0.8 females) was found in 79 males (17.5%) and 98 females (21.7%)..

A total of 450 teenagers were screened, of whom 240 (53.3%) were male. The median age was 15 years (IQR: 13-15). Clinical screening detected 9/450 children, whereas screening echocardiography detected 97/450 suspected cases of RHD. Definitive echocardiography confirmed 9/450 with RHD corresponding to a prevalence of 2% per 1000 (95% CI, 6.7-36.5). All but one of the confirmed RHD cases (8/9) were borderline RHD corresponding to a prevalence of 19.2 per 1000 (95% CI, 8.3-37.5) for borderline RHD and 2.4 per 1000 (95% CI, 0.1-13.3) for definite RHD. RHD was more common in boys.

Conclusions: Conclusions

This study showed prevalence of RHD among children and adolescents. It also confirmed that Rheumatic heart diseases cannot be diagnosed or confirmed without proper investigations. Clean environment, early detection, timely health education and access to quality health care delivery will go a long way to eradicate rheumatic heart diseases in the communities.