

Risk factors for cardiac dysfunction in children on treatment for cancer at Kenyatta National Hospital, Nairobi

Shiroya-Wandabwa, M; Yuko-Jowi, C; Nduati, RW; Githanga, J; Wamalwa, D

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Abstract:

OBJECTIVE: To determine the point prevalence of abnormal cardiac function and to assess the risk factors for cardiac dysfunction in paediatric oncology patients on treatment at Kenyatta National Hospital. **DESIGN:** Descriptive cross-sectional study with a nested case control. **SETTING:** Kenyatta National Hospital between February and April 2006. **MAIN OUTCOME MEASURES:** Left ventricular dysfunction if ejection fraction (EF) <55% or fractional shortening (FS) <29% defined cases. Controls had EF >55% or FS >29%. **RESULTS:** One hundred and eleven patients were enrolled of whom 32 had abnormal cardiac function and were classified as cases while 79 had normal cardiac function. About a third, point prevalence 29% (95% CI 21.2-37.9), had cardiac dysfunction. Cumulative anthracycline dose was a risk factor for cardiac dysfunction in this population. Above 200 mg/m² the attributable risk percentage of cardiac dysfunction was 77%. **CONCLUSIONS:** Serial echocardiography should be performed to identify patients at risk. Alternative treatment protocols should be used when the cumulative anthracycline dose exceeds 200 mg/m² due to the high attributable risk. Studies to further assess the other associated risk factors and long term effects of anthracycline are recommended.