



**AC036**

**Adult Cardiology & Clinical Cardiovascular Medicine** • Poster Presentation

## **RELATIONSHIP BETWEEN INDICES OF VENTRICULAR REMODELLING AND VENTRICULAR REPOLARIZATION IN AMATEUR FOOTBALLERS AT A FOOTBALL ACADEMY IN LAGOS.**

**AYODELE OO, ADEBOLA AP, DANIEL FA.**

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**Background:** Exercise-induced ventricular remodelling has been proposed as a possible substrate for arrhythmogenesis and sudden cardiac deaths in otherwise healthy sportsmen. QT parameters are a reliable measure of repolarization heterogeneity and can help predict arrhythmogenesis and sudden cardiac death risk. **Objective:** To examine the relationship between echocardiographic indices of ventricular remodelling and electrocardiographic measures of ventricular repolarization in amateur footballers at a football academy in Lagos. **Methods:** A total of 75 participants (50 amateur male footballers with no pre-existing cardiovascular disease engaged in regular training and 25 age and sex matched healthy controls) were enrolled into this study. Clinical, electrocardiography (ECG) and echocardiography data were obtained.

**Results:** The test group had significantly lower heart rate and higher systolic blood pressure compared to the controls group. Amateur footballers showed significantly higher right and left ventricular remodelling compared to controls. The footballers demonstrated significantly lower measures of ventricular repolarization compared to controls. There was significant positive correlation between the proximal RVOT dimension and measures of ventricular repolarization in lead V1. The inter-ventricular septum, left ventricular posterior wall and relative wall thickness showed significant positive correlation with ventricular repolarization heterogeneity in leads V3-V6.

**Conclusion:** This study showed that modest echocardiographic indices of right and left ventricular remodelling in amateur footballers demonstrated significant positive correlation with the ECG measures of ventricular repolarization. Moderate exercise may offer some form of cardio-protective benefits by decreasing the risk of arrhythmogenesis and sudden deaths.

**Keywords:** VENTRICULAR REMODELLING, VENTRICULAR REPOLARIZATION, AMATEUR FOOTBALLERS, SUDDEN CARDIAC DEATHS.