BACKGROUND/STUDY OBJECTIVE: Atrial fibrillation is the most common chronic cardiac rhythm disturbance. It occurs very often in patients with congestive heart failure. Several Caucasian studies have been done to characterize AF occurrence among heart failure patients, but there is paucity of local studies in this regard.

The objectives of this study are to determine the prevalence of AF among heart failure patients, and to identify the clinical, ECG, and echocardiographic features associated with it.

STUDY DESIGN: Descriptive cross-sectional study.

METHOD: A total of 195 patients attending the medical out-patient clinics and/or admitted into the medical wards for heart failure were recruited into the study. Heart failure was defined by Framingham’s criteria. Their biodata was obtained and a full physical examination was carried out. ECG was done and those with atrial fibrillation were identified. 2D echocardiogram was performed on all patients, with particular reference to intra-cardiac dimensions and aetiology of heart failure. The clinical features, ECG and echocardiographic features of those in AF were compared with those in sinus rhythm.
RESULTS: The prevalence of AF was 18.5%. HHD was the most common aetiology of heart failure but RHD was the aetiology most associated with the development of AF. There was a relationship between increasing left atrial size and left ventricular dimensions and the development of AF. Impaired left ventricular systolic function (reduced fractional shortening and ejection fraction) was associated with AF. There was no sex difference in AF prevalence, and no relationship between duration of HF, severity of HF and the development of AF.

CONCLUSION: This study demonstrates a strong relationship between RHD and AF though the commonest aetiology of HF was HHD. There was a relationship between increasing left atrial and left ventricular dimensions, reduced fractional shortening and LV ejection fraction, and the development of AF.