

**A REVIEW OF CLINICAL PROFILE OF ATRIAL FIBRILLATION IN RMMCH,  
CHIDAMBARAM.**

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**ABSTRACT**

Atrial fibrillation is the most common arrhythmia due to disorganized, rapid, and irregular atrial activation. Though the risk factors, clinical features, etiology and complications of atrial fibrillation is well known, this study reviews the clinical profile of patients presenting with Atrial fibrillation to Rajah Muthiah Medical college, Chidambaram.

**Keywords:** Atrial fibrillation, Rheumatic heart disease, CCF, Hyperthyroidism

**1. INTRODUCTION**

Atrial fibrillation<sup>1</sup> is the most common sustained arrhythmia. It is marked by disorganized, rapid, and irregular atrial activation. The ventricular response to the rapid atrial activation is also irregular. In an untreated patient, the ventricular rate also tends to be rapid and is entirely dependent on the conduction properties of the AV junction. Although AF is common in the adult population, it is extremely unusual in children unless structural heart disease is present or there is another arrhythmia that precipitates the AF, such as paroxysmal SVT in patients with WPW syndrome. The incidence of AF increases with age such that >5 % of the adult population over 70 will experience the arrhythmia.

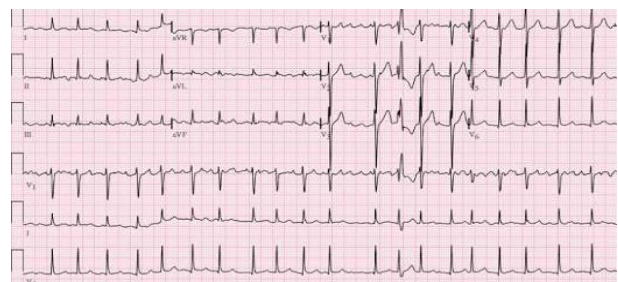
Symptoms from AF vary dramatically<sup>1</sup>. Many patients are asymptomatic and have no apparent hemodynamic consequences from the development of AF. Other patients experience only minor palpitations or sense irregularity of the pulse. Many patients, however, experience severe palpitations and hemodynamic instability. AF has clinical importance related to the loss of atrial contractility, the inappropriate fast ventricular response and the loss of atrial appendage contractility and emptying leading to the risk of clot formation and subsequent thromboembolic events.

**OBJECTIVES:**

To review the risk factors, etiology, clinical features and complications profile of patients with Atrial Fibrillation presenting to Rajah Muthiah medical college.



**AF with fast ventricular rate.**



**AF with Slow ventricular rate**

**2. METHODOLOGY:**

This study will be conducted during the period from Sept 2013 to Oct 2015. During this period all patients presenting with Atrial Fibrillation admitted to the department of Medicine, Rajah Muthiah Medical College and Hospital, Chidambaram will be studied.

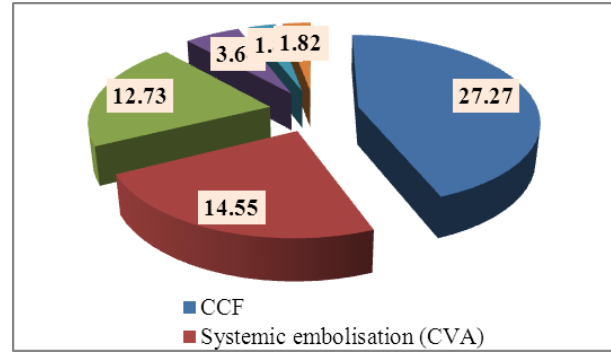
Those included in the study are patients with irregularly irregular pulse, pulse Deficit > 10 per minute and varying R-R interval in the 12 lead ECG. Pregnant woman, patients of age less than 18 established case of Pheochromocytoma, patients with implantable pacemaker and severe Co-morbid

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condition or end organ dysfunction are excluded from the study

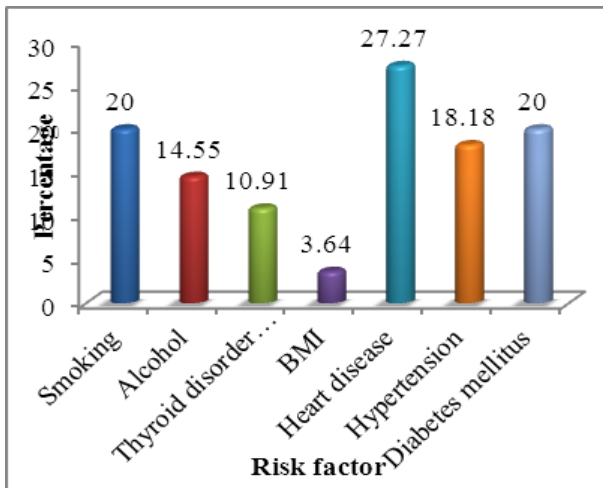
### 3.RESULTS

Of the 55 patients in our study, the maximum number of cases were between the age group 60-79 years (28 patients).The percentage of male patients presenting with AF was 43 % to that of female patients which was 56.36 %. Out of 55 patients, 15 cases (27.27 %) of them were found to be heart diseases and 11 cases (20.00 %) of them were smokers and had diabetes mellitus. The common symptoms were dyspnoea in 41 (74.55 %) cases, palpitation in 38 (69.09 %) cases, pedal edema 31 (56.36 %) cases, cough 21 (38.18 %) cases and chest pain 19 (34.55 %) cases. Rheumatic heart disease was found to be the most common cause of Atrial fibrillation in 24 cases (43.64 %). Thyroid disorders were the second common cause of atrial fibrillation 12 cases (21.82 %). Among the 55 patients with atrial fibrillation, congestive cardiac failure was present in 22 (40 %) cases, systemic embolisation alone in 9 (16 %) cases, CCF with CVA 10 cases (18.18 %) and transient ischemic attack in 4 cases (7.7 %). There were no complications in 8 (14.45 %) cases.

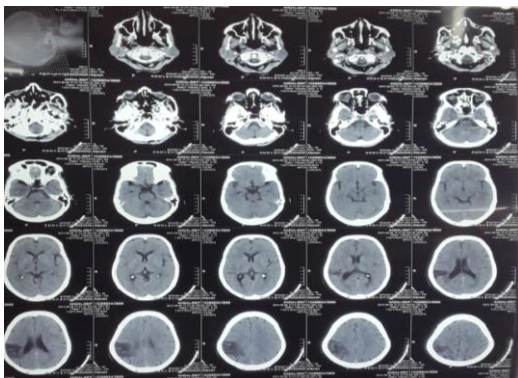


### 4.DISCUSSION

In this present study of atrial fibrillation the age range is wide and the age of the patients varied from 25 to 85 years with a mean age of  $54.84 \pm 17.49$  years. The mean age of AF patients observed in two Indian studies by Sharma et al<sup>2</sup> and Gural Singh et al<sup>3</sup> were  $40 \pm 7$  years and 57.33 years respectively. The risk factors which could have contributed to the development of atrial fibrillation as reported by Douglas P Zipes<sup>4</sup> like Heart disease, smoking, alcohol consumption were specially noted in the present study. History of heart disease was present in 15 (27.27 %) out of total 55 cases of atrial fibrillation and the history of smoking was present in 11 (20.00 %) cases. Steward PM and Catterall JR<sup>5</sup> in a case report suggested the relation between consumption of large doses of nicotine chewing gum for a long period and onset of atrial fibrillation is 35 years. In our study no statistically significant co-relation for smoking and alcohol as risk factor for occurrence of atrial fibrillation was noted. In the present study rheumatic heart disease accounted for majority of cases of atrial fibrillation, i.e., 24 (43.6 %). Rheumatic heart disease with mitral stenosis accounted for majority of cases. Thyroid disorder was second most common etiology in this study, with hyperthyroidism being the more common cause of atrial fibrillation in (11) cases. Incidence of hypothyroidism is a very rare etiology for atrial fibrillation. In our study (1) case was reported as hypothyroidism but mechanism is unknown. In the present study, 22 (40 %) cases developed congestive cardiac failure. The ALFA study<sup>6</sup> showed 38 % of patients had congestive cardiac failure. 30 % of patients were having symptomatic heart failure in the study by Sharma et al<sup>2</sup>. In the present study there were 9 (16.3 %) cases of ischaemic stroke. In the ALFA study<sup>6</sup> 10.8 % cases presented with history of embolic episodes which correlates well with our study. Hinton et al<sup>7</sup>. reported a high incidence of stroke in mitral valve lesions, he observed that stroke occurred in 41 % of patients with rheumatic heart disease, 35 % of patients with ischaemic heart disease and 35 % of those with coexisting rheumatic heart disease and ischaemic heart disease.



Complications	Number of patient	( %)
CCF	22	40
CVA	9	16.33
CCF + CVA	10	18.18
TIA	4	7.72
No complications	8	14.45
Death	2	3.63



### 5.CONCLUSION:

In our study the most common etiology for atrial fibrillation being rheumatic heart disease was in chord with existing literature. Hyperthyroidism was the second common etiology with western data suggesting hypertension as second common cause. Complications were in line with old data with congestive cardiac failure being the commonest.

But complications seen in 47 out of 55 patients in our study show the need for heightened awareness for identifying and managing atrial fibrillation, as catastrophic outcomes like death has also been reported.

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