



## ANALYSIS OF THE AETIOLOGICAL FACTORS CLINICAL FINDINGS AND COMPLICATIONS OF ATRIAL FIBRILLATION

**Dr. B. Murali Krishna**

Assistant Professor, Department of General Medicine Alluri Sitarama Raju Academy of Medical Sciences Eluru – 534 005, West Godavari District Andhra Pradesh

**Dr. Pannem Pavan Kumar**

Postgraduate, Department of General Medicine Alluri Sitarama Raju Academy of Medical Sciences Eluru – 534 005, West Godavari District Andhra Pradesh

**Dr. R Bhargavi**

Post Graduate, Department of General Medicine Alluri Sitarama Raju Academy of Medical Sciences Eluru – 534 005, West Godavari District Andhra Pradesh

**ABSTRACT** Atrial fibrillation is one of most common arrhythmia that may leads to complications like congestive heart failure, left atrial clots&embolic strokes. I did the study about various Structural heart diseases like Rheumatic heart disease, Hypertension, Dilated cardiomyopathies causing Atrial fibrillation & its symptoms like Dyspnoea, palpitations, dizziness etc. Sample Size of 50 persons from the asram hospital .patients from the medical& cardiology op & ICU are taken into study. All patients below 18 yrs are excluded from my study.

**KEYWORDS :** ATRIAL FIBRILLATION, RHEUMATIC HEART DISEASE, STROKE, HEART FAILURE.

### INTRODUCTION:

Atrial fibrillation is the commonest sustained disorder of cardiac rhythm. Patients with chronic atrial fibrillation may require long term treatment with potent antiarrhythmic and anticoagulant drugs, which may have important pharmacological interactions and adverse effects. In addition, treatment differs importantly for chronic and paroxysmal atrial fibrillation and for atrial fibrillation, atrial flutter, and the other supraventricular tachyarrhythmias. As the prevalence of the condition increases with age, atrial fibrillation will become increasingly common in the increasingly aging population.

In the Framingham study, hypertension, cardiac failure, and rheumatic heart disease were the commonest precursors of atrial fibrillation..

### AIM OF THE STUDY:

- 1) Analysis of Etiological factors of atrial fibrillation.
- 2) Analysis of clinical features of atrial fibrillation.
- 3) Analysis of Complications of atrial fibrillation

### MATERIALS AND METHODS:

This study was conducted at ASRAMS medical college, Eluru. This study was conducted during period of Sept 2015 to March 2017, 50 cases with atrial fibrillation were included in this study. 50 consecutive cases were recorded.

### Inclusion Criteria

Both male and female patients were included in this study. Samples were collected from medical OP, medical ward, Medical ICU, Trauma ICU cardiology OP & cardiac ICU.

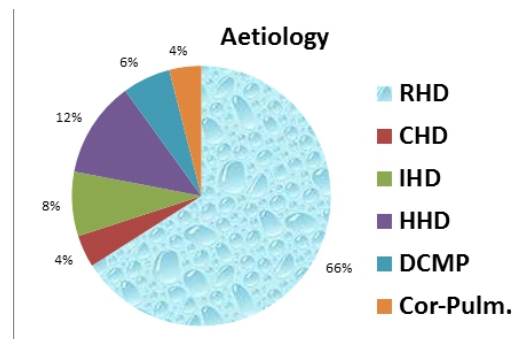
### Exclusion Criteria

Paediatric patients under 18 years were not included in this study

### DATA ANALYSIS:

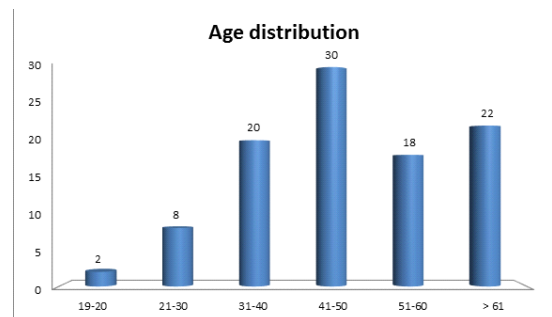
#### AETIOLOGY:

Causes	No of cases	Percentage
Rheumatic Heart disease	33	66
Congenital Heart disease	2	4
Ischemic Heart disease	4	8
Hypertensive Heart disease	6	12
Dilated Cardiomyopathy	3	6
Cor-pulmonale	2	4



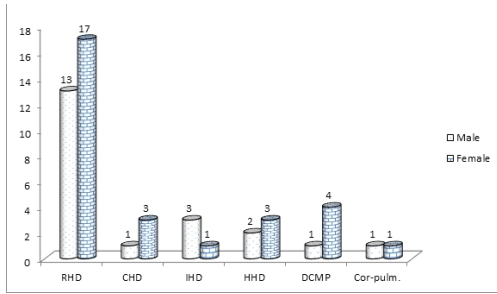
### AGE DISTRIBUTION:

Age in years	No of cases	Percentage
19-20	01	02
21-30	04	08
31-40	10	20
41-50	15	30
51-60	09	18
61 and above	11	22



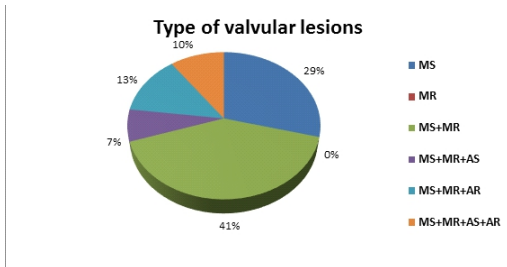
### GENDER DISTRIBUTION:

Causes	Male	Female
Rheumatic Heart disease	13	17
Congenital Heart disease	1	3
Ischemic Heart disease	3	1
Hypertensive Heart disease	2	3
Dilated Cardiomyopathy	1	4
Cor-pulmonale	1	1
Total	21	29
Percentage	42%	58%



**TYPES OF VALVULAR LESION IN RHEUMATIC HEART DISEASE:**

Type of valvular lesions	no of cases	Percentage
Mitral stenosis	09	29
Mitral regurgitation	00	00
MS+MR	13	41
MS+MR+AS	02	07
MS+MR+AR	04	13
MS+MR+AS+AR	03	10

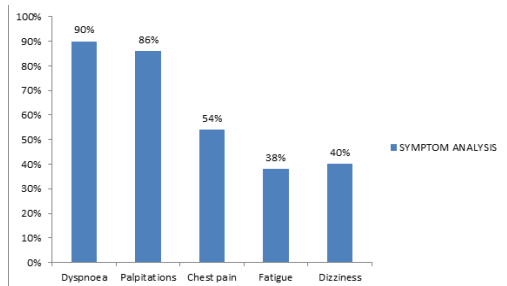


**PREVIOUS HISTORY OF RHEUMATIC FEVER:**

No of cases of RHD	H/O Rheumatic Fever	Percentage
31	13	42%

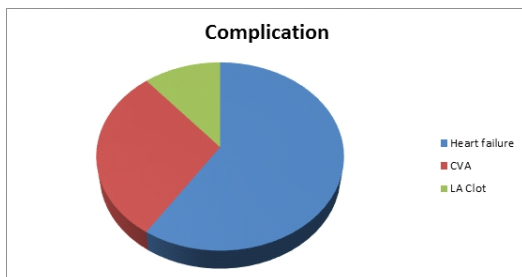
**SYMPTOM ANALYSIS:**

Symptoms	No of cases	Percentage
Dyspnoea	45	90%
Palpitations	43	86%
Chest pain	27	54%
Fatigue	19	38%
Dizziness	20	40%



**COMPLICATIONS:**

Complication	No of cases	Percentage
Heart failure	16	32%
CVA	8	16%
LA Clot	3	6%



**DISCUSSION:** An attempt has been made to study fifty cases of AF regarding aetiology, clinical manifestations, and complications

**DEFINITION:** [1]

Atrial fibrillation is an arrhythmia that is characterised by seemingly disorganised and depolarization without effective atrial contraction. During atrial fibrillation electrical activity of atrium can be detected on ECG as small irregular baseline undulation of variable amplitude and morphology called 'f' waves, at a rate of 350 to 600 beats/min

**CLASSIFICATION OF ATRIAL FIBRILLATION:**

**1. PAROXYSMAL**—Intermittent self terminating episodes [2] Duration less than 7 days with spontaneous termination [3]

**2.PERSISTENT**— Prolonged episodes terminated by electrical or chemical Cardio version. Duration greater than 7days [3]

**3.PERMANENT:** Present all the time [4] Restoring sinus rhythm is either not possible or is not deemed appropriate.

**4.LONE ATRIAL FIBRILLATION**

AF in the absence of clinical or echocardiography findings of cardiopulmonary disease patients with LAF who are under 65 have best prognosis.Cause is mainly FAMILIAL: [1, 2, 4, 6]

**Clinical Features:[1,5]**

The following symptoms were enquired from all the patients. Those include dyspnoea, palpitation, chest pain, fatigue, dizziness, neurological deficit, oliguria. The presence of following signs was made out. That includes pedaledema, puffiness of face, cyanosis, anaemia, signs of hyperthyroidism.Heart rate, pulse rate, pulse deficit, blood pressure monitoring,JVP-absent “a” wave, cardio vascular system examination were documented in all the patients.

**THE DIAGNOSIS OF AF:**

The diagnosis was made on clinical grounds and then confirmed by ECC and Echocardiogram.

**ECC RECORDING:[3,7]**

- A, 12, lead ECC was taken for all the cases. It was standardized to produce a deflection of 10 mm per 1MV input and the paper speed was set at 25 mm per second. The ECC features of AF were noted, it includes
- Absent P wave
- Replaced by irregular chaotic fibrillatory F waves, in the setting of irregular QRS complex.
- Look for LVH, free excitation, bundle branch blocks, acute or prior myocardial infarction

**ECHOCARDIOGRAPHY:**

- M-mode, 2D echo was done in all the patients.
- The rhythm of heart was noted.
- The presence of valve thickening and calcification and regurgitation were noted.
- Size of valve orifice and chambers of heart were assessed.
- Presence of clot in the atrium and atrium appendages was identified.
- Vegetations were searched.
- Ejection fraction of ventricle was measured

**CONCLUSION:**

- The occurrence of atrial fibrillation was more common above theage of 40 years.
- AF was more common in females – 58%
- The incidence of AF in men increases with age.
- In this fifty cases the common aetiology of AF was RHD 66% followed by Hypertensive heart disease – 12 %, congenital heartdisease (ASD) 4% and Ischemic heart diseasecarries 8%.
- In this 66% of rheumatic heart disease with atrial fibrillation. Themitral valve was involved in almost all the patients. Thecommonest clinical presentation was MS + MR – 41 %. Followedby isolated MS – 29 %.The combination of mitral and aortic valvelesion –10%.
- The congenital heart disease (ASD) with AF was found in 4% ofcases.
- The most common symptomatic presentations were dyspnoea andpalpitation followed by chest pain and dizziness.
- The previous history of rheumatic fever was found in 42 % of cases.

- The commonest complication was noted in AF cases was heartfailure – 32%. CVA with embolic stroke was found in 16% of cases.
- Left atrial clot was demonstrated by echo cardio graphically in 6%of cases.

**REFERENCES:**

1. Braunwald's heart disease- Text book of cardiovascular medicine, 7th edition,Pno:816
2. Davidson principle and practice of medicine, 28th edition,Pno 562-564
3. Article of atrial fibrillation,Author:Jeffry lazar, MD, MPH, Chiefresidential, section of emergency medicine, Yale New HeavenHospital: March 5, 2007
4. Article from cardiology- department university hospital Birmingam UK, Author, John E.PWaktare
5. Am J Med 1995; 98:476–84).
6. Clinical medicine Kumar and clark.
7. "ACC/AHA/ESC 2006 Guidelines for the Management of Patientswith Atrial Fibrillation: a report of the American College ofCardiology/American Heart Association Task Force on PracticeGuidelines and the European Society of Cardiology Committee forPractice Guidelines (Writing Committee to Revise the 2001Guidelines for the Management of Patients With AtrialFibrillation): developed in collaboration with the European Heart Rhythm Association and the Heart Rhythm Society". Circulation 114(7):e257-354.