



A Study of Incidence, Clinical Features, Risk Factor Profile and Prognosis of Atrial Fibrillation in Hospitalised Elderly Patients

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ABSTRACT

Atrial fibrillation is the commonest sustained disorder of cardiac rhythm. Epidemiological studies shows that atrial fibrillation is fairly uncommon in people aged under 50 years but is found in 0.5% of people around 60 years and increases to 8.8% at around 80 yrs. This study is taken up to understand the Incidence, Clinical Features, Risk Factor profile and prognosis of Atrial Fibrillation in Hospitalised Elderly patients.

METHODS: *This is a descriptive study conducted among the patients with various types of cardiac dysarrhythmia admitted in RMMCH. 100 patients were evaluated as per the history, general physical examination, systemic examination. Blood sugar, fasting lipid profile, serum electrolytes, fasting thyroid profile, 12 lead ECG and 2D Transthoracic echocardiography.*

RESULTS: *In our study, Atrial Fibrillation was the most common dysarrhythmia found in 19 patients. 16 patients (84%) belonged to 60 - 70 years age group. There were 8 (42%) males and 11(58%) females. Palpitation was the most common (100%) and Limb weakness was the least common (10%) clinical feature. Rheumatic Heart disease was found to be the most common risk factor seen in 9 (47%) patients. Mitral Stenosis with Mitral Regurgitation was the most common valvular abnormality seen in the 5 (55%) Rheumatic Heart Disease patients. Other important risk factors include Hypertension and Hyperthyroidism each accounting for 4 (21%) patients. Among the 19 patients of Atrial Fibrillation, rate control was achieved in 16 (85%) patients and full recovery in the rest.*

CONCLUSION: *In our study, most patients belonged to 60 – 70 yrs age group with female predominance. Palpitation was found to be the most common clinical feature. Rheumatic Heart disease was found to be the most common risk factor in our study and Mitral Stenosis with Mitral Regurgitation was the most common valvular abnormality among them. Among the Atrial Fibrillation patients, rate control was achieved in 16 patients and full recovery in the rest suggesting a good prognosis. Alcohol consumption induced atrial fibrillation and Hyperthyroidism were found to be the fully reversible causes of Atrial Fibrillation.*

Key Words: *Atrial Fibrillation, Rheumatic Heart Disease, Hyperthyroidism.*

INTRODUCTION

Atrial fibrillation (AF) poses a major global public health challenge because it is increasing in prevalence and is associated with an increased risk of stroke, dementia, heart failure, and death^(1,2). At 40 years of age, the remaining lifetime risk for developing AF is ≈ 1 in 4 for both white men and women, and it remains as high at older ages because of the steeply increasing risk for AF with advancing age (the comparable lifetime risk in men and women is due to the greater longevity of women).^(3,4) Abundant studies are available about the Incidence, Clinical Features, Risk Factor profile and prognosis of Atrial Fibrillation in Hospitalised Elderly patients in western population. This study is taken up to understand the Incidence, Clinical Features, Risk Factor profile and prognosis of Atrial Fibrillation in Hospitalised Elderly patients in rural population.

RESEARCH METHODOLOGY

The study was conducted among the patients admitted with dysarrhythmias in CCU and ICU of Rajah Muthiah Medical College Hospital.

METHODS

A minimum of 100 patients with ECG changes of cardiac arrhythmias were taken for the study. Following investigations were done after detailed clinical evaluation.

1. CBC with ESR
2. FBS, PPBS, RBS
3. Fasting Lipid Profile
4. BUN, Sr. Creatinine
5. Sr. Electrolytes
6. Fasting Thyroid Profile
7. Cardiac enzymes

8. Chest X ray
9. All patients were subjected to 12 lead ECG and detailed Trans-thoracic Echocardiography (ECHO) and Doppler evaluation using PHILIPS IE33 High Performance Echocardiography machine.

Study Type:

Descriptive Cross Sectional Study

Inclusion Criteria:

Both sexes of age above 60 yrs with ECG changes of cardiac arrhythmia were taken.

OBSERVATION AND RESULTS

- Most patients (84%) belonged to the 60 – 70 yrs age group
- The total number of male patients were 8 (42%) and female patients were 11 (58%)
- Palpitation was the most common (100%) and Limb weakness was the least common (10%) clinical feature
- Rheumatic Heart disease was found to be the most common risk factor seen in 9 (47%) patients.
- Hypertension and Hyperthyroidism were found to be the other most important risk factors each accounting for 4 (21%) patients.
- Mitral Stenosis with Mitral Regurgitation was the most common valvular abnormality seen in 5 (55%) Rheumatic Heart Disease patients.
- Rate Control was achieved in 16 (85%) patients
- Full recovery in 3 (15%) patients with hyperthyroidism and Alcohol consumption induced atrial fibrillation.

TABLE 1. Age Wise Distribution

S.No.	Age group	No. of cases	Percentage
1.	60 – 65 years	8	42
2.	66 -70 years	8	42
3.	71 – 75 years	1	5
4.	76 – 80 years	1	5
5.	> 80 years	1	5

TABLE 2. Gender Wise Distribution

S.No.	Gender	No. of cases	Percentage
1.	Males	8	42
2.	Females	11	58

TABLE 3. Clinical Features

S.No.	Clinical Features	No. of cases	Percentage
1.	Palpitation	19	100
2.	Dyspnea	16	84
3.	Giddiness	13	68
4.	Chest Pain	13	68
5.	Fatiguability	12	63
6.	Orthopnea	11	58
7.	Leg Swelling	7	37
8.	Decreased urine output	4	21
9.	Paroxysmal Nocturnal Dyspnea	3	15
10.	Head Ache	3	15
11.	Limb Weakness	2	10

TABLE 4. Risk Factors

S.No.	Risk Factors	No. of cases	Percentage
1.	Rheumatic Heart disease	9	47
2.	Hypertension	4	21
3.	Hyperthyroidism	4	21
4.	Coronary Artery Disease	1	5
5.	Alcohol Consumption	1	5

TABLE 5. Valvular Lesions In Rheumatic Heart Disease Patients With Atrial Fibrillation

S.No.	Valvular Lesions	No. of cases	Percentage
1.	MS with MR	5	55
2.	MS	2	22
3.	MS MR with AR	1	11
4.	MS MR with AS	1	11

TABLE 6. Prognosis

S.No.	Prognosis	No. of Cases	Percentage
1.	Recovered	3	15
2.	Controlled	16	85

RESULTS

In our study, Atrial Fibrillation was the most common dysarrhythmia found in 19 patients. Majority of patients 16 (84%) belonged to 60 - 70 years age group. There were 8 (42%) males and 11(58%) females. Palpitation was the most

common(100%) and Limb weakness was the least common(10%) clinical feature. Rheumatic Heart disease was found to be the most common risk factor seen in 9 (47%) patients. Mitral Stenosis with Mitral Regurgitation was the most common valvular abnormality seen among 5 (55%)

Rheumatic Heart Disease patients. Other important risk factors include Hypertension and Hyperthyroidism each accounting for 4 (21%) patients. Among the 19 patients of Atrial Fibrillation, rate control was achieved in 16 (85%) patients and full recovery in the rest.

DISCUSSION

Curt D Furberg et al and Grant V. Chow et al showed that Normal aging is associated with a higher incidence of many cardiac arrhythmias including Atrial Fibrillation^(5,6). A study by Michiel Rienstra, MD et al showed that the most common arrhythmia encountered in clinical practice was atrial fibrillation⁽⁷⁾. In our study, the most common arrhythmia encountered was Atrial fibrillation seen in 19 patients (8 males and 11 females) out of the 100 patients with dysarrhythmias. Michiel Rienstra, MD et al, showed that the most common symptom is Palpitation⁽⁷⁾. In our study, Palpitation was the most common (100%) and Limb weakness was the least common (10%) clinical feature. Rajdatt Deore et al study showed that the most common cause of nonvalvular Atrial Fibrillation is Hypertension whereas in India valvular Atrial fibrillation due to Rheumatic heart disease predominates⁽⁸⁾. In our study, Rheumatic Heart disease was found to be the most common risk factor seen in 9 (47%) patients. Mitral Stenosis with Mitral Regurgitation was the most common valvular abnormality seen among 5 (55%) Rheumatic Heart Disease patients. A study done by K-H Yiuet al showed that in patients with hypertension, alteration of cardiac haemodynamic, structural and electrophysiological properties imposed by hypertension and LVH can contribute to the development of Atrial Fibrillation, ventricular arrhythmia and SCD⁽⁹⁾. Hwang JK et al showed that the most common risk factor implicated in Atrial fibrillation is Hypertension. In the study done by Agner T et al, 25% of hyperthyroid patients older than 60 years had atrial fibrillation compared to 5% in patients less than 60 years of age⁽¹⁰⁾. In our study, Other

important risk factors for development of Atrial fibrillation include Hypertension and Hyperthyroidism each accounting for 4 (21%) patients. A study by Bartalena L et al showed that Atrial Fibrillation induced by Thyrotoxicosis is completely reversible in upto 50% of the patients⁽¹¹⁾. Among the 19 patients of Atrial Fibrillation in our study, rate control was achieved in 16 (85%) patients and full recovery in the rest. In our study, Atrial fibrillation was fully reverted to normal sinus rhythm in 2 patients (50%) with Hyperthyroidism.

CONCLUSION

In our study, most patients belonged to 60 – 70 years age group with female predominance. Palpitation was found to be the most common clinical feature. Rheumatic Heart disease was found to be the most common risk factor in our study and Mitral Stenosis with Mitral Regurgitation was the most common valvular abnormality. Among the 19 patients of Atrial Fibrillation, rate control was achieved in 16 patients and full recovery in the rest suggesting a good prognosis. Alcohol consumption induced atrial fibrillation and Hyperthyroidism were found to be the fully reversible causes of Atrial Fibrillation.

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