

# Causes of Atrial Fibrillation, its awareness and medication use in patients presented to peripheral hospital of KPK

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## ABSTRACT

**Aim:** To observe the etiological causes of atrial fibrillation in local population at Mansehra, Pakistan.

**Study design:** Descriptive cross-sectional study

**Place & duration of study:** DHQ Hospital Mansehra Pakistan from 1<sup>st</sup> March 2017 to 30<sup>th</sup> April 2018

**Methods:** Two hundred and fifty patients with atrial fibrillation were included in the study. Atrial fibrillation was diagnosed on 12 lead ECG, having irregularly irregular rhythm and no obvious P waves found.

**Results:** Majority of patients (160) were females. Hypertension was the major cause of atrial fibrillation afflicting 35 % patients while 25% patients had mitral valve disease, 20 % patients had heart failure and 10 % patients had thyroid disorder as the cause of atrial fibrillation.

**Conclusion:** Atrial fibrillation commonly occurs in female and above 50 years old population and hypertension and mitral valve diseases are commonest causes.

**Keyword:** Atrial fibrillation, Hypertension, Mitral valve

## INTRODUCTION

Atrial fibrillation is known as one of the common causes responsible for cardiovascular death and hospitalization and is having major health issue in public and also a major burden on health resources<sup>1,2,3</sup>.

Pakistan is having approximately 4 cases per 1000 population<sup>4</sup>. Majority of causes of atrial fibrillation are preventable. CHARGE-AF is one of the common models which were designed for USA population and Western Europe. This model was aimed to prevent occurrence of atrial fibrillation in population and was based mainly on important risk factors like age, race, weight, height, smoking, blood pressure and use of medications for blood pressure. Other factors like diabetes, history of myocardial infarction and heart failure were also considered<sup>5</sup>. Early identification of the risk factors and treating them well on time can prevent the atrial fibrillation and its outcomes<sup>6-10</sup>.

This study is will help to identify various causes of atrial fibrillation, awareness of the disease in community and types of medications used for its treatment.

## MATERIALS AND METHODS

This study was performed at District Head Quarter Hospital of Mansehra Pakistan. Study was started on 1<sup>st</sup> March in 2017 and data was collected till 30.4.2018. Total sample size was 250. All patients included in the study was having atrial fibrillation. Atrial fibrillation was diagnosed on 12 lead ECG, having irregularly irregular rhythm and no obvious P waves found. Detailed history and clinical examination, with all relevant investigation for the cause of AF were taken as by American guidelines for AF<sup>11,12</sup>. The data was entered and analyzed through SPSS-20.

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## RESULTS

The mean age was 59.7±14.6. There were 160(64%) females and remaining were males. Causes of atrial fibrillation were studied and most common cause was hypertension and mitral valve disease (Table 1). Regarding awareness about Atrial fibrillation majority of patients (40%) were unaware of their disease. Regarding stroke prevention, majority of patients were on aspirin only or no such treatment was used at hospital presentation (Table 2).

Table 1: Causes of atrial fibrillation (n=250)

Etiology	n	%age
HTN	87	35
Mitral valve	62	25
Heart failure	50	20
ACS	11	4.4
Aortic valve	4	1.6
Thyroid	18	7.2
RTI	2	0.8
HOCM	2	0.8
Unknown	9	3.6
COPD	5	2

Table 2: Drugs used for AF

Drug	n	%age
No drug	100	40.0
Aspirin	100	40.0
Clopidogrel	20	8.0
Warfarin	5	2.0
Dual antiplatelet	15	6.0
Rivaroxaban	10	4.0

## DISCUSSION

In our study mean age for atrial fibrillation patients were 59.7 which is same is one found by Ikramullah et al<sup>13</sup> in their study of mean age of 60.7 years. Majority 68% patients were females in a study performed in Turkish

population, they found that majority of patients were hypertensive (62.5%) as we found in our study (35%) but there was different findings regarding second common cause of atrial fibrillation. In our study we found that mitral valve disease is the leading cause after hypertension (25%) and in Turkish study coronary artery disease was the second commonest cause of Atrial fibrillation noted (33%)<sup>10</sup>. Similarly a study conducted in USA found that hypertension is the commonest cause of Atrial fibrillation exactly we found in our study but similar to Turkish study they also found ischemic heart disease is the second common cause of atrial fibrillation<sup>11</sup>.

Regarding management of atrial fibrillation we found that most patients were unaware of their disease and those who were aware were only using aspirin in majority of cases. Tavassoli<sup>14</sup> and Tulner<sup>15</sup> also found in their studies that upto 50% patient not receive proper anticoagulation treatment which means that proper antioagulation practices are lacking in majority of places.

## CONCLUSION

Atrial fibrillation is commonly undiagnosed and mistreated condition in this part of the world and usually common in patients with hypertension and mitral valve diseases.

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