ORIGINAL ARTICLE

Atrial Fibrillation Clinical Presentation and Pathophysiology in Elderly Patient

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ABSTRACT

Aim: To observe the clinical epidemiological features of Atrial Fibrillation in elderly patients in tertiary care hospitals of Lahore.

Methods: In this observational study, Sample size is 2900 patientsdata with atrial fibrillation. Patients data from Jan: 2015 to Dec:2016 were included. Inclusive criteria was all patients above age ≥55 years were included .Mean age was 63.4 years (±12.3), 73% male.Time prolonged risk factors of atrial fibrillation including age , sex, alcohol use ,fatty diet , Smoking, hypertension, heart valve disease,ventricular dysfunction, obesity, sleep apnea, variation in gene, cardiomyopathy, Kidney disease, systematic inflammation and ischemic heart disease were observed. Most of the patients has prolonged hypertension are observe as variables.

Results: Total 2900 were analyze and asses, Clinical presentation starts from asymptomatic atrial fibrillation with vigourously ventricular response, which may convert to cardiogenic shock or cerebrovascular attack. Asymptomatic patients of atrial fibrillation, initially focused on patient hemodynamic stabilitycan be enhanced by direct current. Symptomatic patients have benefits from intravenous rate controlling agents, either calcium channel blocker or beta blockers. Anyhow upto 60% of Atrial Fibrillation attacks might be without any symptoms **Conclusions:**There are multiple clinical sign & symptoms of Atrial fibrillation. Early recognition of of atrial fibrillation, as well as sort out best underlying solution, is requiredto adopt different improved methods for management and prevention of atrial fibrillation.

Keywords: Atrial Fibrillation, clinical presentation,pathophysiology.

INTRODUCTION

Atrial Fibrillation, the more rampant continuous arrhythmia, is coupled to mark morbidity, deductions in healthy lifestyle and living standards, and high risk mortality due to variation in hemodynamics, rapid atrial and ventricular malfunction, increased chances of thromboembolic attacks[1].

Atrial fibrillation is not presenting common pathwayofpredisposing non cardiac and cardiac situations[2].Clinical presentations varie from asymptomaticto devastating sign and symtoms[3].

The main aim of this article is to sort out most common clinical feature of atrial fibrillation and their relation with pathophysiology of atrial fibrillation[4]. We are trying to give a perception on how all pathophysiological mechanisms can form a final decision point in mixture of different cardiac conditions of atrial fibrillation[5].

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Risk Factors for Atrial Fibrillation: Atrial fibrillation is versatile condition in ranging from single electrophysiological disorder to different cardiac and noncardiac condition.

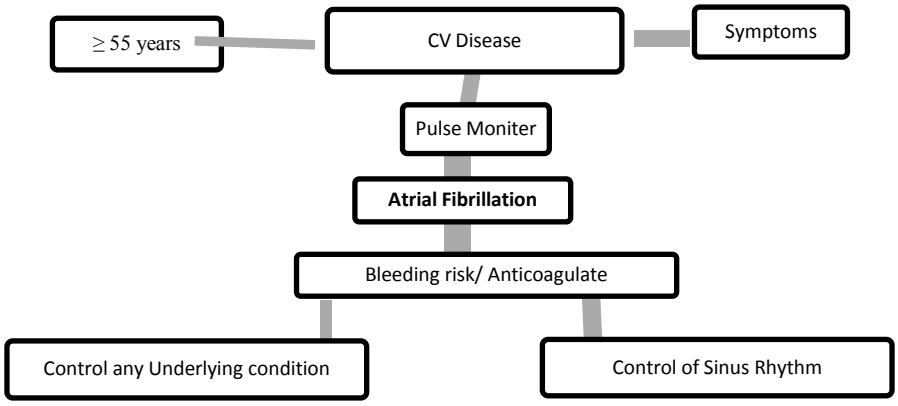
Table 1: Summarize percentage of atrial fibrillation risk factors:

Risk Factor	Estimated Increase Risk of AF(%)
Age	3
Sex	1.7
Hypertension	1.3-1.8
Obesity	1.6-2.7
Alcohol Consumption	1.5-1.7
LV Dysfunction	5.1-6.2
Obstructive Sleep Apnea	2.9-5.7
Physical Activity	2.95
Genetic	1.92
Diastolic Dysfunction	3.46-5.54
Cardiomyopathy	4.3-6.4
Chronic kidney disease	1.3-3.4
Inflammation	1.67-1.87
Pericardial Fat	1.4-5.5
Tobacco Usage	1.5-2.2
AF indicates Atrial Fibrillation & LV – Left Ventricular	

Pathophysiology of atrial fibrillation: Atrial Fibrillation has multipart pathophysiology. Atrial

Fibrillation can manage by targeting quick rhythm firing, Calcium channel treatment are central. Structural changes, primarily due to atrial fibrosis, causes conduction slowing and conduction path that can bring sudden block. Fibrosis may lead to boost up fibroblasts and alter their characteristics, promoting Atrial fibrillation through changing the electrophysiological pattern of cardiomyocytes in combination to fibroblasts.

Table 2: Organogram presenting Pathophysiology of Atrial Fibrillation



METHODOLOGY

This is observational study and enrollment of patients starts from January 2015 to December 2016. Total 2900Atrial fibrillation wasanalyze and asses, from the data cardiac rhythm disorders diagnosed patients were selected. By filling out prepared questionnaire, we take steps to sort out data required for study.Mean age was 63.4 years (±12.3), 73% male. Time prolonged risk factors of atrial fibrillation including alcohol use ,fatty diet, Smoking & hypertension were 57%, heart valve disease were13%, ventricular dysfunction 21%, obesity were 29%, sleep apnea were 17%, variation in gene was 4%, cardiomyopathy 23%, Kidney disease 11%, systematic inflammation and ischemic heart disease were 13%. Anyhow upto 30% of atrial fibrillation attacks might be without any symptoms.

Atrial fibrillation diagnosis remains a tough task due its unpredictable presentation.To date, many of the typical clinical presenting features are often missing. The researcher try there level best to recollect the challenging task to re-emphasize a broad spectrum of pathophysilogy and clinical presentation of atrial fibrillation. Clinical presentation of atrial fibrillation is a vital stage and of significant important for further timely treatment of patients especially in old age.

RESULTS

Total 2900 were analyze and asses, Mean age was 63.4 years (±12.3), 73% male. Clinical presentation starts from asymptomatic atrial fibrillation with vigoursly ventricular response, which may convert to cardiogenic shock or cerebrovascular attack. Atrial Fibrillation classically enhance arrhythmia through dysfunction of ion channels, but the pattern of most common multiple risk factors of atrial fibrillation is still poorly understood and remain under intensive investigation and experiment.Asymptomatic Patients of atrial fibrillation, initially focused on patient hemodynamic stabilitycan be enhanced by direct current. Symptomatic patients have benefits from intravenous rate controlling agents, either calcium channel blocker or beta blockers. Anyhow upto 60%

of Atrial Fibrillation attacks might be without any symptom. More prone to high risking were male in gender, it is due to aggressive work load and imbalance in proper diet maintaining. Females are more non responding towards treatment regime. Females are more reluctant towards complete treatment and present more adversely with sign and symptoms.

DISCUSSIONS

Inorder to considerate the basic presenting sign and symptoms of atrial fibrillation provides better understanding of the pathophysiology of the arrhythemia[6]. More significantly, such consideration might become basic factor to recover atrial fibrillation prevention measures. By promoting the elementary mechanisms, which cause to exaggerate the risk promoting Atrial fibrillation[7].

From the study it is become aware that time prolonged risk factors of atrial fibrillation including age, sex, alcohol use ,fatty diet , Smoking, hypertension and obesity can be reduced by adapting the healthy life style and balance diet[8]. Regular exercise and cardio pulmonary rehabilitation is going to be quiet beneficial for elderly patients. In the developing country, it is become a hazard to bound elderly population in around the home[9].Development in functional capability and quality of life alternate to rhythm against heart rate control tricks are quiet helpful in atrial fibrillation patients better and quick prognosis. By contrast it gives much better results in enhancing quality of life[10].

Insight of all risk factors leading towards atrial fibrillation, we might be able to develop targeting therapeutic management that are leading towards preventing progressive cardiac tissue substrates that promoting to Atrial fibrillation[11].

We observe that different models of care are vary from both locally and nationally in many places in sense of care in atrial fibrillation patients, which uptill now have been regarded as more favourable to secondary care are now being undertaken in primary care[12]. Now, it looks like this trend will continue. So, we can avoid to imposing artificial boundaries. The focusing audience of the proper guidelines in any healthcare professional working , who is involved in caring of atrial fibrillation patients[13].

Insense of applying precautionary steps effectively and aggressively, it is the need of hour to promote methods for considering every patient pathophysiology and risk pattern. In future, development towards making new biomarkers and innovative technologies towards atrial fibrillation to the highest degree give opportunity for the indentification of evidence-based mechanisms[14].

The advance ground breaking pathways to grap the new trends and effectively applicable primary and secondary prevention measures that may be approved on individualized basis to target the prevention of atrial fibrillation[15].

CONCLUSION

There are multiple clinical sign & symptoms of atrial fibrillation in elderly patients. But more common risk factor is still poorly solve and it cannot be predict or diagnose from few sign and symptoms. Early recognition of the clinical features of atrial fibrillation, as well as sort out best underlying solution, is required to adopt different improved methods for management and prevention of Atrial fibrillation.

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