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FREQUENCY OF ASYMPTOMATIC ATRIAL FIBRILLATION IN PATIENTS ATTENDING CARDIOLOGY OPD

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ABSTRACT

Objectives: To study the frequency of asymptomatic atrial fibrillation in patients attending cardiology OPD.

Material and Methods: This descriptive study was conducted from January 2007 to January 2008. A total of one thousand patients attending cardiology out patient department of the PGMI Hayatabad Medical Complex, Peshawar were included. ECG was done and those found having atrial fibrillation were asked regarding symptoms and eligibility for anticoagulation according to the preformed questionnaire. They were further investigated to know the cause of atrial fibrillation.

Results: Out of 1000 subjects 517(51.7%) were male and 483(48.3%) were female , mean age was 66.74 years $\pm$ 7.06SD. Out of total patients, 48(4.8%) were found to have atrial fibrillation. 42(87.5%) patients were symptomatic and 6(12.5%) patients were asymptomatic. Amongst 48 patients with atrial fibrillation 25(52.1%) were eligible for anticoagulation and 23(47.9%) were not eligible. Out of atrial fibrillation patients, 30(62.5%) were male and 18(37.5%) were female.

Conclusion: Atrial fibrillation is not uncommon in our community. These patients are at increased risk of vascular events and stroke. Timely detection and oral anticoagulation can alter the outcome in these patients.

Keywords: Asymptomatic atrial fibrillation, anticoagulation, echocardiography.

INTRODUCTION

Atrial fibrillation comprises of a large and growing epidemic in the aging population[1]. It is a common contributor to the cardiovascular morbidity and mortality[2]. On Electrocardiogram the atrial fibraillation is characterized by the replacement of consistent P waves by the rapid oscillations or fibrillatory waves that vary in amplitude, space and timing, associated with an irregular, frequently rapid ventricular response. Epidemiological data estimates that 2.2 million individuals suffer from atrial fibrillation in the United States[3].

The incidence of atrial fibrillation increases with age. The prevalence of atrial fibrillation is approximately 2-3% in patients older than 40 years of age, 6% in those over 65 years of age and 9% in individuals over 80 years old[4]. From clinical stand point atrial fibrillation is associated with mortality rate twice that of the general population and accounts for up to five fold increases in the incidence of stroke[5,6]. Although most patients with atrial fibrillation are identified because they have symptoms[7,8,9], it is sometimes first diagnosed when patients present with stroke[10].

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Asymptomatic atrial fibrillation is common in untreated patients with history of symptomatic atrial fibrillation[11]. Patients with asymptomatic paroxysmal atrial fibrillation may be exposed to the risk of devastating consequences of atrial fibrillation such as stroke, congestive heart failure or tachycardia induced cardiomyopathy for years before a definitive diagnosis of atrial fibrillation is made. Atrial fibrillation is usually recognized by the onset of symptoms, such as palpitation and anxiety, which is common in paroxysmal atrial fibrillation or dyspnea and chest discomfort, which is often noted in persistent atrial fibrillation.

At least one third of the patients with atrial fibrillation have no obvious symptoms and noticeable degradation of quality of life[12]. In AFFIRM study (atrial fibrillation follow up investigation of rhythm management study) patients were considered asymptomatic, if answer to the 15 questions symptom check list was negative within the 6 months before the baseline examination, the symptoms include dizziness, light headedness, fast heart rate, palpitation, syncope, dyspnea, edema, orthopnea, paroxysmal nocturnal dyspnea, chest pain, diaphoresis, diuresis, fatigue and panic. Asymptomatic atrial fibrillation patients have none of these symptoms. These patients have more cerebrovascular events and less serious heart disease. Oral anticoagulation is a corner stone of therapy for patients with atrial fibrillation. Warfarin anticoagulation is highly effective in reducing the risk of stroke in

patients with atriall fibrillation[13]. To know the frequency of asymptomatic atrial fibrillation and amplitude of the problem in our community this study was conducted.

MATERIAL AND METHODS

Ethical committee permission was taken. This descriptive study of 1000 subjects both male and female, age 60 and above, attending cardiology OPD were conveniently selected from January 2007 to January 2008. After thorough clinical examination, their ECG was recorded after informed consent. Those patients having atrial fibrillation on ECG were asked regarding symptoms according to the preformed questionnaire. Those found having negative answer to the questionnaire were considered as having asymptomatic atrial fibrillation. The risk of thromboembolic phenomena and stroke with asymptomatic atrial fibrillation and benefits of the prophylactic anticoagulation were explained to them and their eligibility for prophylactic anticoagulation was recorded according to their age, International normalization ratio detection facility and their affordability. They were further investigated to know the cause of atrial fibrillation. Patients already diagnosed with atrial fibrillation, permanent pacemaker patients, those with atrial fibrillation after cardiac surgery, those with pneumonia, chronic obstructive airway diseases and pericarditis were excluded from the study.

RESULTS

Mean age of 1000 subjects was 66.74years $\pm$ 7.08 SD, in which 517(51.7%) were male and 483(48.3%) were female. Among 1000 subjects 48(4.8%) patients were having atrial fibrillation. Out of atrial fibrillation patients, 25(52.1%) were eligible for anticoagulation and 23(47.9%) were non-eligible for anticoagulation according to the selected criteria for anticoagulation eligibility. Amongst 48 patients with atrial fibrillation, 6 (12.5%) patients were asymptomatic and 42 (87.5%) were symptomatic. 30 (62.5%) patients were male and 18(37.5%) were female. 841(84.1%) patients were in the range of 60-70 years, 146(15.4%) belongs to group 71-90 years of age while 5 (0.5%) patients were above 90 years of age.

Amongst the 841 patients in the age range of 60-70 years atrial fibrillation was noted in 38(4.5%) patients. None of the patiets above 90 years had atrial fibrillation. In the 48 patients with atrial fibrillation 8(16.7%) patients had hypertension, 8 were having rheumatic heart disease and 9 (18.8%) patients had congestive cardiomyopathy. Five (10.4%) patients were thyrotoxic, 5(10.4%) having initial presentation with hypertension and stroke. These were the major diseases found in the observed patients. Asymptomatic atrial fibrillation patients shows significant effect with major diseases with P value = 0.006.

DISCUSSION

Assessment of the prevalence of silent or asymptomatic atrial fibrillation represents a challenge. Since the arrhythmia may be brief, completely asymptomatic and difficult to detect only on 12 lead ECG, at one particular occasion, which records only 15 seconds of cardiac activity. Most of the data up till now has been obtained from retrospective uncontrolled trials. A very large incidence of generally short paroxysm of atrial fibrillation has been seen in the patients with implantable pacemaker and defibrillators and this arrhythmia is often silent.

Estimates on the frequency of patients with asymptomatic atrial fibrillation vary widely depending upon the duration of arrhythmia. The symptoms with atrial fibrillation decrease with longer duration of action. Patients without symptoms may have atrial fibrillation for longer period before the condition is discovered either by a routine examination or during an evaluation of other medical condition such as stroke or during population survey. Little is known about the frequency of asymptomatic prevalence. Asymptomatic atrial fibrillation has been studied in different trials. Six large scale randomized studies have demonstrated that warfarin reduces the risk of stroke by approximately 61% compared to placebo[14].

Kulbertis et al found atrial fibrillation in 193 patients (0.44%) out of 4306 ambulatory subjects in their community hypertension screening program[15]. Ptsay et al in the cardiovascular health study among 4844 subjects who were without atrial fibrillation at baseline, after 3 years of follow up, 304 developed atrial fibrillation and 11.8% were asymptomatic[16]. Kerr et al in Canadian registry of atrial fibrillation (CARAF) study, 21% with atrial fibrillation were asymptomatic[17]. Brand et al in the Framingham heart study found asymptomatic atrial fibrillation in 20% of those who were having atrial fibrillation (n=32) out of 5209 subjects[18].

Kopecky et al in their population study at Minnesota amongst 3623 subjects, 97 patients had lone atrial fibrillation and in 24% the atrial fibrillation was asymptomatic[19]. Camm et al group general practice at Sussex Study found asymptomatic atrial fibrialltion (10.5%) in 340 paients over age 80 admitted in hospital for non-cardiovascular reason[20]. Molaschi et al reported asymptomatic atrial fibrillation 27.9% on 12 lead in hospital ECG[21]. In levy et al ALFA study (atrial fibrillation general practice in france) amongst 758 patients with atrial fibrillation 11.4% were asymptomatic[22]. AFFIRM study (asymptomatic atrial fibrillation demographic features and prognostic information from the atrial fibrillation follow up investigation of rhythm management), which is one of

the largest multicenter, randomized trial involving 4060 patients, the frequency of asymptomatic atrial fibrillation was 12%.

Looking into these studies mentioned the atrial fibrillation frequency varies from 10% (detected by ECG) to even 50% detected by the implanted pacemaker and defibrillaters.The automatic, interpresentation for diagnosis assistance (AIDA) study stated that 50.6% of the patients in whom pacemaker was implanted had developed atrial fibrillation and more than 2/3 of those arrhythmia were atrial fibrillation.58% of these arrythmias were asymptomatic[23]. Different studies have shown the incidence of asymptomatic atrial fibrillation in the range of 10-40%.

In our study out of 1000 patients, 48 had asymotomatic fibrillation (4.8%), amongst these 48 patients with atrial fibrillation, 6 patients were found asymptomatic (12.5%) and 42 were having symptoms (87.5%), findings consistent with the largest AFFIRM study.The observation in this study goes hand in hands with the above mentioned studies but one thing, which is different, is that most of the patients with atrial fibrillation in the above mentioned studies were associated with hypertention, lone atrial fibrillation, coronary artery diseases, ischemic heart diseases and cardiomyopathies. The atrial fibrillation associated with the rheumatic heart disease was not significant in many of these studies and probably may be due to their better social living conditions. But in my study 8 patients out of 48 were having atrial fibrillation with rheumatic heart disease. The overall frequency of atrial fibrillation in my study is (4.8%). It is also comparable to the finding of the data from the Framingham study in which the frequency of atrial fibrillation is 4% at age 60-65 years.

CONCLUSION

Atrial fibrillation is not uncommon problem in our community and it does not run a benign course. Physicians caring for patients age 60 years and above are requested to regularly check the pulse of these patients in their clinical practice and to record one ECG if possible. To prevent dreadful complication with AF, it is also recommended that INR checking facilities should be available at district and tehsil level hospitals.

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