Prevalence, Risk of thromboembolism and bleeding, and anticoagulation in patients with atrial fibrillation and stable coronary artery disease at Al Shab Teaching Hospital

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Introduction

Atrial fibrillation (AF) not infrequently exists in patients with stable coronary artery disease (SCAD) as several risk factors of both these diseases overlap. The coexistence of AF in patients with SCAD not only confers increased mortality and morbidity [(1) (2)] but also makes the management of anticoagulation more difficult due to the possible need for concomitant antiplatelet therapy.

Objectives

1- To study prevalence of AF in patients with SCAD
2- To study anticoagulation and antiplatelet therapy used in patients with SCAD and AF
3- To study bleeding risk in patients with AF and SCAD using HAS-BLED score
4- To study risk of stroke in patients with SCAD and AF using CHADS2-VASc score

Methods

Study design: Descriptive prospective cross sectional hospital based study.

Study area: Al Shab Teaching Hospital Cardiology outpatient department. Al Shab Teaching Hospital is located in the center of Khartoum, Sudan. It is a tertiary referral center for Cardiology and houses the National Cardiothoracic Center with coronary care unit, cardiac catheterization lab and cardiac surgery facilities.

Study period : January 2014 to March 2014

Inclusion criteria: All adult patients with established SCAD and AF. Established coronary artery disease (CAD) was defined as patients with prior myocardial infarction (MI), non-invasive test positive for ischemia, prior coronary angiogram showing significant coronary artery disease (CAD) of > 50 % diameter stenosis, prior PCI or prior CABG.

Exclusion criteria: Patient with acute coronary syndrome (ACS) in the last 12 months and patients not consenting to the study

Study population: All patients presenting to the outpatient clinic with a diagnosis of CAD were consented to the trial. Consented patients were interviewed and medical charts were reviewed to verify

diagnosis of CAD and verify any prior record of AF. All patients had ECG (electrocardiogram) at the time of visit.

CHADS2-VASc score and HASBLED score were calculated for patients with CAD and AF. These scores were described elsewhere [3][4].

Data was analyzed using SPSS 13 package.

Results:

Total number of patients satisfying inclusion criteria were 156. Eight patients were found to have both SCAD and AF constituting 5% of the cohort.

Number of screened patients were 1230 with 348 patients labelled as CAD. Consented patients were 276 and only 156 had documented SCAD. Excluded patients were on the basis of inability to verify CAD or had recent ACS.

Mean age was 62 years with M;F ratio of 3:2. Age distribution is shown in Fig (1) below.

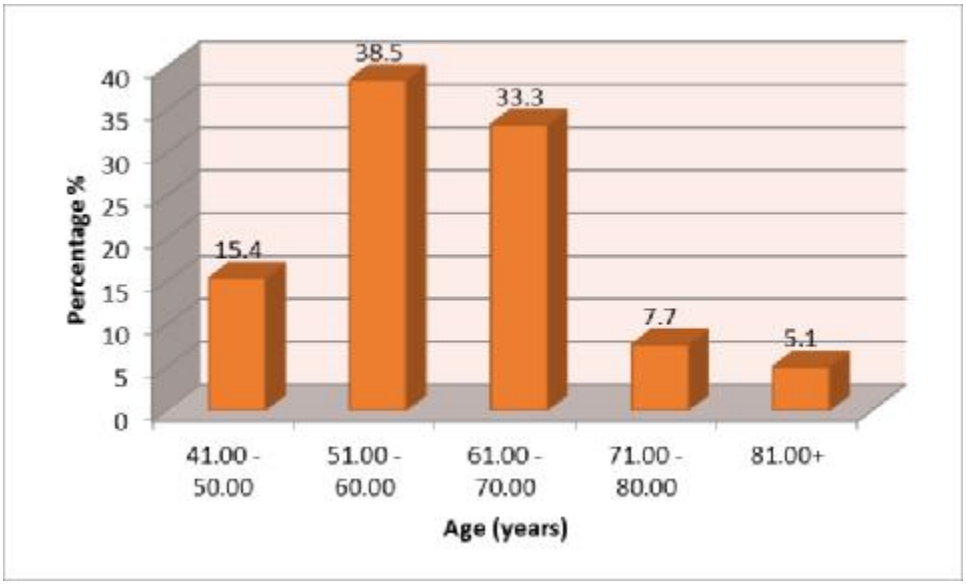

Figure 1 . Age distribution of patients with SCAD and AF. SCAD (stable coronary artery disease) ; AF (Atrial Fibrillation).

The average CHADS2-vasc and HAS-BLED score were 4 and 3 respectively with distribution of CHADS2-vasc and HAS-bled scores amongst study population shown in Table 1.

CHADS2-VASc score	Frequency	Percent
2	1	12.5
4	3	37.5

5	3	37.5
6	1	12.5
Total	8	100
HAS-BLED score	Frequency	Percent
2	3	37.5
3	3	37.5
4	2	25
Total	8	100

Table 1 showing distribution of CHADS2-Vasc and HAS-BLED scores.

All patients with AF and SCAD were receiving warfarin . None was receiving antiplatelet therapy.

Discussion:

The mean age of our population was similar to that of patients with non-rheumatic AF in the RELY-AF registry (66 years) which included more than 15,000 patients from 47 countries around the globe with similar M:F ratio [5] .

Prevalence of AF in patients with CAD in reported studies has varied greatly[1] [2]and our reported prevalence of 5 % seems to be represent an intermediate value.

CHADS2-Vasc scores and HAS-BLED scores have been devised to assess risk of thromboembolism and risk of major bleeding from warfarin anticoagulation respectively and both carry a value of 0 to 9 [6]. Our study values of 4 for CHADS2-VASc score and 3 for HAS-BLED score both indicate high risk of thromboembolism and also major bleeding in our population [7].

All patients in our study received warfarin. None received concomitant antiplatelet therapy. This is probably explained by the fact that patients with recent ACS were excluded from the study. Use of warfarin alone in patients with stable coronary artery disease is endorsed by the guidelines which suggest warfarin monotherapy alone may be considered in secondary prevention in patients with AF and stable coronary artery disease [8][9].

Conclusion

Atrial fibrillation and stable coronary artery disease coexist in our study population with significant risk for thromboembolism and major bleeding. Warfarin was used solely in all patients without concomitant use of antiplatelet agents.

Limitations

The major limitation of this study is the small number of study population as well as cross-sectional study design rather than long-term follow up.

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