Abstract: P3703

Frequency of undiagnosed atrial fibrillation in patients presenting with acute ischemic cerebrovascular stroke

Authors:
M. Hassan Abdelnabi1, A. Almaghraby2, T. Oz3, Y. Saleh4, H. Badran5, 1Medical Research Institute, Alexandria University, Cardiology and Angiology Unit, Clinical and Experimental Internal Medicine Department - Alexandria - Egypt, 2Faculty of Medicine, Alexandria University, Department of Cardiology - Alexandria - Egypt, 3Çamlica Hospital, Medipol University - Istanbul - Turkey, 4Michigan State University - East Lansing - United States of America, 5Ain Shams University, Faculty of Medicine, Department of Cardiology - Cairo - Egypt,

Topic(s):
Stroke – Clinical

Citation:
European Heart Journal (2019) 40 (Supplement), 2303

Introduction: Acute ischemic cerebrovascular stroke (CVS) can be the first clinical manifestation of atrial fibrillation (AF), that is why large-scale screening programs for AF are currently implemented especially in individuals more than or equal 65 years old. Yet, to date, cost-effectiveness data have relied on assumptions of stroke rates observed in patients with established AF, while the true incidence rates of undiagnosed AF presenting as a stroke remain unknown.

Purpose: To estimate the incidence of patients with no history of AF who are presented with acute ischemic CVS and are found to be in AF at the time of presentation or developed atrial fibrillation during the hospital stay.

Methods: A retrospective analysis of all patients admitted with acute CVS to a tertiary care stroke specialized center in the period from 01/01/2014 till 31/12/2017.

Ischemic CVS is confirmed by either multislice computed tomography (MSCT) or magnetic resonance imaging (MRI) of the brain.

AF is documented by electrocardiography (ECG) that is made at admission or during hospital stay. Patients with history of AF on rate or rhythm-control therapy were excluded from the study.

Results: Of the 3299 patients admitted by acute ischemic CVS, 707 (21.43%) patients had history of AF and they were on medical rate or rhythm control therapy and thus were excluded from the study.

Of the remaining 2592 patients eligible for the study, 1666 (64.27%) were males with a mean age of 56.06 years (±16.01).

Regarding ECG, 2313 (89.24%) patients were in sinus rhythm and other non-AF rhythms and 211 (8.14%) presented with AF rhythm and 68 (2.62%) developed AF during their hospital stay with a cumulative incidence of (10.76%).

Conclusion: The incidence of undiagnosed atrial fibrillation in patients presented with acute cerebrovascular stroke is significantly high. Implementation of good screening programs can significantly reduce the risk of disabilities and morbidities.

Table 1. Baseline patient characteristics and ECG data (n=2592)

<table>
<thead>
<tr>
<th>Risk factors</th>
<th>n=2592</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypertension</td>
<td>1849 (71.33%)</td>
</tr>
</tbody>
</table>
Abstract: P3703
Frequency of undiagnosed atrial fibrillation in patients presenting with acute ischemic cerebrovascular stroke

Authors: M. Hassan Abdelnabi 1, A. Almaghraby 2, T. Oz 3, Y. Saleh 4, H. Badran 5
1 Medical Research Institute, Alexandria University, Cardiology and Angiology Unit, Clinical and Experimental Internal Medicine Department – Alexandria – Egypt
2 Faculty of Medicine, Alexandria University, Department of Cardiology – Alexandria – Egypt
3 Çamlica Hospital, Medipol University – Istanbul – Turkey
4 Michigan State University – East Lansing – United States of America
5 Ain Shams University, Faculty of Medicine, Department of Cardiology – Cairo – Egypt

Topic(s): Stroke – Clinical

Citation: European Heart Journal (2019) 40 (Supplement), 2303

Introduction: Acute ischemic cerebrovascular stroke (CVS) can be the first clinical manifestation of atrial fibrillation (AF), that is why large-scale screening programs for AF are currently implemented especially in individuals more than or equal 65 years old. Yet, to date, cost-effectiveness data have relied on assumptions of stroke rates observed in patients with established AF, while the true incidence rates of undiagnosed AF presenting as a stroke remain unknown.

Purpose: To estimate the incidence of patients with no history of AF who are presented with acute ischemic CVS and are found to be in AF at the time of presentation or developed atrial fibrillation during the hospital stay.

Methods: A retrospective analysis of all patients admitted with acute CVS to a tertiary care stroke specialized center in the period from 01/01/2014 till 31/12/2017. Ischemic CVS is confirmed by either multislice computed tomography (MSCT) or magnetic resonance imaging (MRI) of the brain. AF is documented by electrocardiography (ECG) that is made at admission or during hospital stay. Patients with history of AF on rate or rhythm-control therapy were excluded from the study.

Results: Of the 3299 patients admitted by acute ischemic CVS, 707 (21.43%) patients had history of AF and they were on medical rate or rhythm control therapy and thus were excluded from the study. Of the remaining 2592 patients eligible for the study, 1666 (64.27%) were males with a mean age of 56.06 years (±16.01). Regarding ECG, 2313 (89.24%) patients were in sinus rhythm and other non-AF rhythms and 211 (8.14%) presented with AF rhythm and 68 (2.62%) developed AF during their hospital stay with a cumulative incidence of (10.76%).

Conclusion: The incidence of undiagnosed atrial fibrillation in patients presented with acute cerebrovascular stroke is significantly high. Implementation of good screening programs can significantly reduce the risk of disabilities and morbidities.

Table 1. Baseline patient characteristics and ECG data (n=2592)

<table>
<thead>
<tr>
<th>Risk factors</th>
<th>n=2592</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes Mellitus</td>
<td>925 (35.69%)</td>
</tr>
<tr>
<td>Smoking</td>
<td>1445 (55.75%)</td>
</tr>
</tbody>
</table>

ECG data
<table>
<thead>
<tr>
<th></th>
<th>n=2592</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-AF</td>
<td>2313 (89.24%)</td>
</tr>
<tr>
<td>AF on admission</td>
<td>211 (8.14%)</td>
</tr>
<tr>
<td>AF in hospital</td>
<td>68 (2.62%)</td>
</tr>
<tr>
<td>Total AF</td>
<td>279 (10.76%)</td>
</tr>
</tbody>
</table>

Undiagnosed AF in acute ischemic CVS

Incidence of Undiagnosed AF

- Non-AF: 89.24%
- AF on admission: 8.14%
- AF in hospital: 2.62%
- Total AF: 10.76%