CARDIOLOGY GRAND ROUNDS

Presentation: ACC 2015 PREVIEW

Date: Monday, March 9, 2015, 7:00 – 8:00 AM

Location: ANW Education Building, Watson Room

Speaker:
- Elevated Troponin in Patients Presenting to the Emergency Department without Chest Pain
  Alex R. Campbell, MD
  Cardiologist, Minneapolis Heart Institute® at Abbott Northwestern Hospital

- "Silent" Atrial Fibrillation Burden in Patients with Hypertrophic Cardiomyopathy
  Ankur Kalra, MD
  Chief Cardiology Fellow
  Minneapolis Heart Institute® at Abbott Northwestern Hospital and Hennepin County Medical Center

- Low Density Lipoprotein Cholesterol, Cardiovascular Risk, and Utilization of Care Prior to ST-Elevation Myocardial Infarction
  Michael Miedema, MD, MPH
  Cardiologist
  Minneapolis Heart Institute® at Abbott Northwestern Hospital

- Percutaneous Veno-Arterial ECMO for Patients Presenting with Refractory Cardiogenic Shock Due to STEMI
  Yader Sandoval, MD
  Cardiovascular Disease Fellow
  Minneapolis Heart Institute® at Abbott Northwestern Hospital

- Treatment and Outcomes of STEMI Patients Presenting >12 Hours After Onset of Chest Pain
  Annie Griffin, BA
  Associate Research Coordinator
  Minneapolis Heart Institute Foundation
OBJECTIVES
At the completion of this activity, the participants should be able to:
1. Summarize emerging research that colleagues will present at upcoming national scientific meeting.
2. Synthesize ideas and input from across disciplines relevant to each presentation.
3. Recommend content revisions or areas of focus to the presenters.

ACCREDITATION
Physicians: This activity has been planned and implemented in accordance with the Essential Areas and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint sponsorship of Allina Health and Minneapolis Heart Institute Foundation. Allina Health is accredited by the ACCME to provide continuing medical education for physicians. Allina Health designates this live activity for a maximum of 1.0 AMA PRA Category 1 Credit™. Physicians should only claim credit commensurate with the extent of their participation in the activity.

Nurses: This activity has been designed to meet the Minnesota Board of Nursing continuing education requirements for 1.2 hours of credit. However, the nurse is responsible for determining whether this activity meets the requirements for acceptable continuing education.

Others: Individuals representing other professional disciplines may submit course materials to their respective professional associations for 1.0 hours of continuing education credit.

DISCLOSURE STATEMENTS
Speaker(s): All presenters have declared that they do not have any conflicts of interest in making these presentations.

Planning Committee: Dr. Michael Miedema, and Eva Zewdie have declared that they do not have any conflicts of interest associated with the planning of this activity. Dr. Robert Schwartz declared the following relationships - stockholder: Cardiomind, Interface Biologics, Aritech, DSI/Transoma, InstyMeds, Intervalve, Medtronic, Osprey Medical, Stout Medical, Tricardia LLC, CoAptus Inc, Augustine Biomedical; scientific advisory board: Abbott Laboratories, Boston Scientific, MEDRAD Inc, Thomas, McNerney & Partners, Cardiomind, Interface Biologics; options: BackBeat Medical, BioHeart, CHF Solutions; speakers bureau: Vital Images; consultant: Edwards LifeSciences.
“Silent” Atrial Fibrillation in Patients with Hypertrophic Cardiomyopathy

Ankur Kalra, Pranay Rao, Amit Sharma, Shreya Bhandari, Ross F. Garberich, Deepa M. McGriff, Susan A. Casey, Raed H. Abdelhadi, JoEllyn M. Abraham, Jay Sengupta, Barry J. Maron

Hypertrophic Cardiomyopathy Center, Minneapolis Heart Institute Foundation, Minneapolis, MN

Background

• Symptomatic atrial fibrillation (AF) occurs in at least 20% of patients with hypertrophic cardiomyopathy (HCM).

• HCM patients with paroxysmal AF have an increased risk of heart failure and embolic stroke.

• Asymptomatic AF is often detected at routine device follow-up, and indications for rhythm-control strategies and anticoagulation are not well-defined for this population.

• Burden and clinical significance created by asymptomatic and “silent” AF in HCM is unknown.
**Methods**

- We studied 288 consecutive HCM patients implanted with implantable cardioverter-defibrillators (ICD), mostly for primary prevention of sudden death.

- Intracardiac electrocardiograms (EGMs) were reviewed to document presence of AF.

- We compared the baseline characteristics and rates of stroke between patients with known and “silent” AF.

**Results**
Results

- 8 (30%) had ICD shocks for VF
- 27 patients (14%) w/ "Silent" AF over 12±6 months
- 5 (19%) developed symptomatic AF
- 5 (19%) progressed to end-stage HCM

Results

Table

<table>
<thead>
<tr>
<th></th>
<th>HCM – AF (n=51)</th>
<th>HCM – &quot;Silent&quot; AF (n=27)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obstruction present, (%)</td>
<td>18 (35.3)</td>
<td>8 (29.6)</td>
<td>0.61</td>
</tr>
<tr>
<td>LVOT Gradient (mmHg)*, median (25th, 75th percentile)</td>
<td>49 (31, 65)</td>
<td>42.5 (32.5, 62.5)</td>
<td>0.82</td>
</tr>
<tr>
<td>Maximum wall thickness (mm),</td>
<td>24.4 ± 6.4</td>
<td>25.6 ± 6.1</td>
<td>0.45</td>
</tr>
<tr>
<td>Stroke/TIA, (%)</td>
<td>5 (9.8)</td>
<td>2 (7.4)</td>
<td>1.00</td>
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* LVOT gradient values only calculated in those with gradient > 0 mmHg
Conclusions

• In a large HCM cohort, we identified about 15% patients with occult (silent) episodes of AF on routine device interrogation.

• About 7% of “silent” AF patients proved to be at risk for embolic events.

• About 20% of “silent” AF patients progressed to symptomatic AF.

• These findings suggest consideration for more aggressive surveillance, earlier anticoagulation, and anticipation of targeted rhythm-control strategies.

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