University of South Florida
GERIATRIC WORKFORCE ENHANCEMENT PROGRAM (GWEP)
Learn@Lunch
Geriatric Education Series
Kathryn Hyer, PhD, MPP
Principal Investigator

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For additional information about this and other USF GWEP events, email amaynard@health.usf.edu

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Asa Oxner, MD, is an Assistant Professor in the USF Morsani College of Medicine Department of Internal Medicine. Dr. Oxner oversees the Suncoast Community Health Centers GWEPClinic in Palm River, where she trains interdisciplinary teams of health professions students in geriatric care and treats the clinic’s medically vulnerable older adult patients.

Dr. Oxner graduated from the USF College of Medicine in 2011 and completed her residency in Internal Medicine at Beth Israel Deaconess Medical Center in Boston. Following her fellowship at Harvard Medical School, she returned to USF in 2014 to teach and treat patients at USF’s Morsani Center for Advance Healthcare and Byrd Alzheimer’s Institute.

Dr. Oxner is active in numerous local and international humanitarian programs including outreach to people living on the streets of Tampa with Tampa Bay Street Medicine; HIV/Ebola response and care of children in Sierra Leone; and medical relief for the devastated citizens of Puerto Rico following Hurricane Irma.

Please join us in welcoming Dr. Oxner for her presentation on the Advantages & Disadvantages of Anticoagulant Therapy in the Treatment of Atrial Fibrillation in the Elderly.
Atrial Fibrillation in the Elderly: Causes, Symptoms, and Treatment

Asa Oxner, MD
Assistant Professor of Medicine
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Co-Investigator: Geriatric Workforce Enhancement Grant
Conflicts of Interest

• I have no conflicts of interest to disclose
<table>
<thead>
<tr>
<th>Understand</th>
<th>Learn</th>
<th>Improve</th>
<th>Review</th>
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<tbody>
<tr>
<td>Understand who develops afib</td>
<td>Learn to identify symptoms of afib</td>
<td>Improve triage of afib complications in the outpatient setting</td>
<td>Review common treatments of afib so you can call attention to medication errors and side effects</td>
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Atrial Fibrillation – Definition

• Atrial Fibrillation (AKA Afib) is an irregular electrical activity that starts in the upper chambers of the heart

• Can make the heart rate slow or fast

• Can be intermittent or constant

• Results in an increased risk of stroke
Electrical Pattern of Normal Heart vs. Afib
Who develops afib?

• More common as you get older – up to 10% of the geriatric population

• 80% of afib patients will have heart disease
• History of heart attacks
• Risk factors for heart attacks
• Enlarged atria of the heart
• Disease of heart valves (mitral valve or aortic valve)
• Heart failure
Who develops afib? (part 2)

- Hyperthyroidism
- Sleep apnea
- COPD/smoker’s lung
- Genetic (family history of afib)
- Patients who get sepsis or pneumonia
Atrial Fibrillation

5 Million
Approximately 5 million people in the U.S. have AFib.

5 Times
AFib patients are five times more likely to suffer a stroke.

15-20%
15-20% of all strokes are AFib-related.

University of Wisconsin
Symptoms of Afib

- Facial droop
- Suddenly unable to speak
- Slurred Speech
- Unable to move arm or leg
- Sudden loss of vision

Asymptomatic

- Tiredness
- Shortness of breath
- Exercise intolerance
- Leg swelling
- Lightheadedness or dizziness

Stroke

Heart failure
Most common complications of Afib
Complications of Afib—Stroke

• 1-15% per patient per year

• Chance of having a stroke per year can be calculated using a tool called the CHADS-VASC score
Afib Increases your risk of having a stroke

Top chambers (atria) beating in an irregular, uncontrolled manner (fibrillating)

This causes the blood to swirl and stay within the atria (blood “pools”)

This can cause a blood clot to form in the left atrial appendage

Left atrial appendage

Blood clot
<table>
<thead>
<tr>
<th>Criteria</th>
<th>Poss. Point</th>
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<tbody>
<tr>
<td><strong>Congestive heart failure</strong></td>
<td>Yes</td>
</tr>
<tr>
<td>Signs/symptoms of heart failure confirmed with objective evidence of cardiac dysfunction</td>
<td></td>
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<tr>
<td><strong>Hypertension</strong></td>
<td>Yes</td>
</tr>
<tr>
<td>Resting BP &gt; 140/90 mmHg on at least 2 occasions or current antihypertensive pharmacologic treatment</td>
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<tr>
<td><strong>Age 75 years or older</strong></td>
<td>Yes</td>
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<tr>
<td><strong>Diabetes mellitus</strong></td>
<td>Yes</td>
</tr>
<tr>
<td>Fasting glucose &gt; 125 mg/dL or treatment with oral hypoglycemic agent and/or insulin</td>
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<tr>
<td><strong>Stroke, TIA, or TEE</strong></td>
<td>Yes</td>
</tr>
<tr>
<td>Includes any history of cerebral ischemia</td>
<td></td>
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<tr>
<td><strong>Vascular disease</strong></td>
<td>Yes</td>
</tr>
<tr>
<td>Prior MI, peripheral arterial disease, or aortic plaque</td>
<td></td>
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<tr>
<td><strong>Age 65 to 74 years</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Sex Category (female)</strong></td>
<td>Yes</td>
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<tr>
<td>Female gender confers higher risk</td>
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**CHADS-VASC Calculator**
Rate of Stroke per year depends on CHADS-VASC
How to Triage Stroke from Afib

• All suspected strokes should be immediately referred to the hospital
Most common complications of Afib
Complications of Afib—Heart Failure

- Afib can cause heart failure
- Heart failure from other causes can be exacerbated by afib
Failure of regular pumping = back-up

- Into the lungs
- Into the veins of the legs
Shortness of Breath
Swelling of feet & legs
Chronic lack of energy
Difficulty sleeping at night due to breathing problems
Swollen or tender abdomen with loss of appetite
Cough with frothy sputum
Increased urination at night
Confusion and/or impaired memory
How to triage heart failure and afib

By SpO2 & By heart rate & By blood pressure
Afib and Shortness of Breath

Check SpO2

- Less than 93%
  - Refer to the hospital

- Equal to or above 93%
  - Monitor daily
Afib and Heart Rate

- Patients with heart rate above 110 beats per minute for more than 24 hours should be referred to the hospital.
Afib and blood pressure

- Patients with a **blood pressure below 90/50 OR confusion** should be referred to the hospital immediately.
Treatment for Afib

Anticoagulation
• To reduce the risk of stroke

Rate control
• To reduce the rate of heart failure

Rhythm control
• To restore normal heart function
Treatment for Afib

- Anticoagulation (blood thinners)
  - Warfarin
  - Rivaroxaban
  - Apixaban
  - Dabigatran
How important is anticoagulation?

• Full compliance with anticoagulation can reduce the risk of stroke by 64%
Side effects

- Anticoagulants cause easy bleeding:
  - Bloody stools
  - Black stools
  - Vomiting blood
  - Nose bleed
  - Easy bruising
  - Easily have brain bleeds if they fall with head strike
Treatment for Afib

- Rate control
  - Metoprolol
  - Atenolol
  - Carvedilol
  - Diltiazem
  - Verapamil
Side effects

• Rate Control medications cause slow heart rate:
  • Heart rate less than 60
    with
  • Tiredness
  • Shortness of Breath
  • Fainting, dizziness, or lightheadedness
Treatment for Afib

• Rhythm control
  • Tikosyn
  • Sotalol
Side effects

- Rhythm control is not absolutely needed

- Rhythm control medications cause abnormal heart rhythms:
  - Heart rate over 110 or less than 60
Treatment for Afib

- Anticoagulation
  - Warfarin
  - Rivaroxaban
  - Apixaban
  - Dabigatran

- Rate control
  - Metoprolol
  - Atenolol
  - Carvedilol
  - Amiodarone

- Rhythm control
  - Tikosyn
  - Sotalol
Be an advocate!

- If your patient is not on an anticoagulant and a rate control agent, call the provider and ask why.
References