Coronary Artery Disease and Heart Failure: Frequent Signs and Symptoms and Potential Treatment Options

December 2nd, 2021
3:00 PM ET-4:00 PM ET
Before we begin

- All attendees are in listen-only mode
- If you cannot hear, check the audio button on your personal computer to assure the sound is on.
- Please type your questions into the Q&A box at any time during the presentation. Questions will be read and answered after the presentation.
  - Note: The presenter will not be able to answer questions about your child, specifically, or about you as a patient as he is not your treating physician.
- The PDF version of the slides, as well as the recording of this presentation, will be available on the Mended Hearts website following the event.
Mended Hearts ® mission is to inspire hope and improve the quality of life for heart patients and their families through ongoing peer-to-peer support, education and advocacy.

www.mendedhearts.org

www.mendedlittlehearts.org

www.myheartvisit.org

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Dr. Roberta (Bobbi) Bogaev, MD, FACC, FACP

- Medical Director for Heart Failure at Abiomed in Danvers, MA where she leads the Women’s Heart Initiative and works collaboratively on all Abiomed sponsored clinical trials, education, patient advocacy and developing best practices for patients with heart failure.
- Dr. Bogaev advocates for women with heart disease and is an avid supporter of the AHA’s Go Red campaign
- Dr. Bogaev received her mechanical engineering degree from Virginia Tech and her medical degree and training from the University of Virginia. She is board certified in cardiology and advanced heart failure. She spent two years during her fellowship in basic science research and has been actively involved in translational and clinical research for the past twenty years.
CORONARY ARTERY DISEASE AND HEART FAILURE
BOBBI BOGAEV CHAPMAN, MD
MORTALITY DUE TO HEART DISEASE IS INCREASING

About 655,000 Americans die from heart disease each year, 1 in every 4 deaths²

Coronary artery disease is the most common type of heart disease²

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1. CDC Interactive Atlas of Heart Disease and Stroke
2. CDC About Heart Disease

IMP-2410 v2
Epidemiological studies have identified CAD as a major contributor to heart failure burden. Angiographic evidence of CAD has been shown to be a marker for a worse prognosis of Heart Failure, with mortality risk increasing by 250%.

More than 1 million Americans are diagnosed with Heart Failure annually, with mortality the first year exceeding 20%.

Most common cause of Heart Failure is ischemic Coronary Artery Disease (CAD)

Heart Failure (HF) is one of the only Cardiovascular Diseases for which hospitalization rates have worsened over the past 25 years.

Estimated prevalence of Coronary Artery Disease in patients with Heart Failure is 50-65%.

CAD represents potentially treatable or reversible cause of Heart Failure.

Observational studies have demonstrated both improved survival and left ventricular function with revascularization compared with medical therapy alone.
**Coronary Artery Disease**

Clinical Symptoms and Considerations

Patients experiencing **ONE OR MORE** of the following may benefit from a referral for an Impella supported procedure

1. **Reduced/Low Ejection Fraction (EF)**
   - [ ] Preserved
   - [ ] Borderline
   - [ ] Reduced

2. **HIGH-RISK:**
   - [ ] Hospital Admission(s) for Heart Failure
   - [ ] Ineligible for Cardiac Surgery
   - [ ] Graft Failure (Prior Coronary Artery Bypass Graft)
   - [ ] Heart Failure - Chronic
   - [ ] Refractory or Chronic Unstable Angina
   - [ ] Increasing SOB due to CAD/Worsening Edema
   - [ ] Severe Coronary Artery Disease
   - [ ] Kidney Disease - Chronic

3. **Additional Risk Factors:**
   - [ ] History of Myocardial Infarction (MI)
   - [ ] Diabetes
   - [ ] Hypertension
   - [ ] Uncontrolled Dyslipidemia (with elevated LDL)
   - [ ] Inability to Tolerate Optimal Medical Therapy
     - [ ] Anti-Anginal
     - [ ] Heart Failure
   - [ ] Decreased Ability to Perform ADLs
   - [ ] Smoking and/or COPD

**Complex Anatomy Considerations**

- [ ] Multi-Vessel Disease
- [ ] Unprotected Left Main
- [ ] Last Remaining Conduit
- [ ] Complex Lesion
  - [ ] Bifurcation
  - [ ] Calcification
- [ ] CTO Retrograde
- [ ] Large Area of Myocardium at Risk
HEART FAILURE - SIGNS OF CONCERN

**Coronary Artery Disease Symptoms**

**Shortness of Breath** – trouble catching breath doing regular activities or laying down / at rest, often exacerbated by laying flat

**Edema** – Swelling in the legs, ankles, feet, stomach, and neck

**Coughing** – a persistent or unexplained cough could be a sign of fluid buildup in the lungs

**Fatigue** – shortness of breath

**Reduced Ejection Fraction** – a decrease in the amount of blood your heart pumps with each beat. Normal is 55-70%
PATHWAY FOR PATIENT MANAGEMENT

Diagnosis: High-Risk Patient

Medical Management

Revascularization

Heart Team Decision

PCI

CABG

With Hemodynamic Support

Conventional

Protected

Choice of appropriate treatment (PCI vs CABG) by multidisciplinary “heart team” - per Guidelines (Class I)¹

Complex CAD with co-morbidities or unstable angina
- FDA Approved Indication
- per Guidelines¹²

**Impella Supported Procedure**

Only FDA-approved, non-surgical heart pump indicated for patients with severe coronary artery disease requiring high-risk PCI.

Proven safe and effective to assist pumping function of the heart during a stent-placement.

Maintains blood flow to critical organs, which may allow physician to perform a more complete and optimized procedure.

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**The Insertion Procedure**

1. **Access common femoral artery**
2. **Pre-dilate, insert a 34 Fr sheath into the common femoral artery.**
3. **Advance a guidewire with a diagnostic catheter across the aortic valve.**
4. **Impella is inserted and placed across the aortic valve and confirmed in position.**
5. **Removal of the guidewire and the Impella device is started pulling blood from the left ventricle into the aorta.**
The New Era of CAD and Heart Failure

Safe and Effective

Fewer Adverse Events

-29% Reduction

N=427

Control
Impella®

Fewer Adverse Events¹ (MACCE)

Better Quality Of Life

Reduced Heart Failure Symptoms²

Go Home Faster³

-2 days
Less time in hospital

-52%
Fewer readmissions to the hospital

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For additional questions, please email: Andrea.baer@mendedhearts.org