

# UMBRELLA

Focused  
Cardiology Forums

Heart Failure

LEARNING OBJECTIVES  
AND CASE VIGNETTE

3<sup>rd</sup> Session

Acute Decompensated HF



# CASE VIGNETTE

- 65 years old lady  
Housewife, living in a family of three, her activity is limited to household chores
- Presented to ED with exacerbation of dyspnea on exertion with FC III and 2-pillow orthopnea since 2 weeks ago, no other symptom
- PMH: Ischemic cardiomyopathy, S/P CABG 15 years ago, EF: 10-15%
- DH (poor adherence):
  - ASA 80mg daily
  - Rosuvastatin 20mg daily
  - Bisoprolol 2.5mg daily
  - Enalapril 10mg daily
  - Furosemide 40mg bid

# CASE VIGNETTE (CONTINUED)

## Ph/E

- Acutely ill-appearing, alert and oriented
- BMI: 36 kg/m<sup>2</sup>
- HR: 110 bpm, BP: 110/60 mmHg
- RR: 24/min
- O<sub>2</sub>sat: 89% in room air
- Heart: S1 & S2 with tachycardia
- Lungs: Bibasilar rales
- Extremities: warm, 1+ pulses, 2+ & symmetric pedal edema
- 30cc of urine in the bag via foley catheter from half an hour ago

# CASE VIGNETTE (CONTINUED)

- ECG: Sinus tachycardia, LBBB
- Bedside echocardiography:
  - Severe LV enlargement
  - Global LVEF: 10-15%
  - Moderate MR
  - Severe TR
  - TRG: 40mmHg
  - No pleural effusion

# CASE VIGNETTE (CONTINUED)

- Lab tests
  - Hb: 11.2mg/dL
  - WBC: 8600/mcL
  - Plt: 250.000/mcL
  - Cr: 1.9 mg/dL (1.7 mg/dL 1 month ago), eGFR: 29 mL/min/1.73m<sup>2</sup>
  - Na: 128 mEq/L
  - K: 3.1 mEq/L
  - Ca: 8.7 mg/dL
  - Mg: 1.7 mg/dL
  - LFT: mildly elevated transaminases (less than 2 times ULN)
  - Lactate: 3.8 mmol/L (0.5 – 2.2)

**What is the evidence-based approach  
to the management of this patient  
in the emergency department?**

# LEARNING OBJECTIVES

- What are the goals of treatment in patients admitted with acute decompensated HF?
- What is the role of biomarkers in the diagnosis and follow-up?
- How to optimize the HFrEF medications in acute decompensation?
  - Continue? Taper? Discontinue?
  - What to do in the presence of hypotension or worsening renal function?
- How to optimize the HFrEF medications when discharging the patient after admission for acute decompensation?  
How safe & effective is the initiation & uptitration of different principal medications?

# LEARNING OBJECTIVES

- Tips and tricks of decongestion strategy
  - Initial dosing and uptitration
  - Mode of administration (bolus vs. infusion)
  - Role of boosters of loop diuretics:  
Thiazides, MRA, Acetazolamide, Dopamine & ultrafiltration
  - How to evaluate the decongestion success and the adverse effects?
  - Management of loop diuretics on discharge  
(maintenance therapy and safety of discontinuation)

# LEARNING OBJECTIVES

- What is the role of Morphine and Oxygen supplementation?
- Parenteral vasodilation therapy in acute decompensated HF
  - Is there any role? For whom?
  - The preferred agent (Nitroglycerin vs. Nitroprusside)
  - Monitoring hemodynamics on these agents (invasive vs. noninvasive)

# LEARNING OBJECTIVES

- The management of cardiogenic shock
  - The definition and classification
  - Which IV inotropic agent to use? In which patients?
  - What is the role of vasopressors?
  - When to consider mechanical circulatory support?
  - What is the role of invasive hemodynamic monitoring? (PA catheter and arterial line)
  - How is the prognosis?
  - The importance of the patient's wishes

# LEARNING OBJECTIVES

- VTE prophylaxis in hospitalized HF patients
  - For which patient? With what agent?
  - What about the obese patients?
  - Any role for extended prophylaxis after discharge?

# Stay Tuned with Umbrella: Heart Failure

**Acute Decompensated HF**

Shahrivar 18<sup>th</sup>, 14:00 – 15:15

A. Amin, MD; A. Bidari, MD.



[DailyCardiology.com](http://DailyCardiology.com)