

## **C-25 How Do We Manage a Septic Shock Patient Undergoing an Emergent Non-Cardiac Surgery Overnight? An Update on the Management of Sepsis**

**Moderator(s)/Facilitator(s):** Christopher Tam, M.D., Michael Chang, M.D.

### **Objective**

After completion of this session, the participant will be able to:

- Execute the management of a patient in extremis from septic shock based on the most recent clinical guidelines.

### **Case Stem Question**

58 year old male with hypertension, diabetes mellitus 2 (HgbA1C 7%), hyperlipidemia, coronary artery disease s/p LAD/Cx stent DES x 2 2023, obesity (BMI 35), OSA on CPAP, presents to the ED for 4 day history of fever, myalgia, left sided lower abdominal pain. On arrival to the ED, the patient is lethargic, extremities warm to touch, with diffuse abdominal pain and rebound tenderness on physical exam. Vitals: BP- 75/40, HR- 128, RR- 29, SaO2 85%. A rapid response is called and the patient is placed on a non-rebreather, given a 1 liter IV fluid bolus and sent to the CT scan. CT scan shows a perforated diverticulitis and is scheduled for an emergent exploratory laparotomy and you are the on-call attending.

### **Guiding Questions for Discussion**

- 1) What are your concerns for this case?
- 2) What are the classifications of sepsis?
- 3) What are the up to date recommendations from the Surviving Sepsis Campaign?
- 4) How would you induce this patient?
- 5) What monitors would you use? Arterial line? Central Line?
- 6) Surgery begins and the patient requires uptrending norepinephrine and vasopressin infusions and is refractory to fluids. What is in your differential?
- 7) Is there a role for non-adrenergic vasopressors in septic shock? (i.e. methylene blue, angiotensin II)
- 8) A POCUS TTE is done demonstrating reduced LV systolic function. What is septic cardiomyopathy? How do you manage this?
- 9) The surgeon notices diffuse bleeding in the patient and you are concerned of septic induced coagulopathy. How do you manage this? Is there a role for thromboelastography?

### **References**

1) Evans L, Rhodes A, Alhazzani W et al. Surviving Sepsis Campaign: International Guidelines for Management of Sepsis and Septic Shock 2021. Intensive care med. 2021;47(11):1181-1247.

2) Dellinger RP, Evans L et al. Surviving Sepsis Campaign. Crit Care Med. 2023;51(4):431-444.

3) Hollenberg SM, Singer M. Pathophysiology of Sepsis-Induced Cardiomyopathy. *Nat Rev Cardiol.* 2021;18(6):424-434.