

PGY level : 5
04)

Level of complexity:

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Category: Cardiovascular

Objective(s) of the question

1. appropriate assessment of hypovolemia and hypertrophic obstructive cardiomyopathy (HOCM)
2. the management of two conditions: hypovolemic shock and hypertrophic obstructive cardiomyopathy (HOCM);

Opening Scenario:

You are the on-call anesthesiologist. An urgent call from the ER to warn you of a patient coming up to the OR immediately. The patient is a 32 y/o female with a Dx of ruptured ectopic pregnancy, systolic BP 75, & HR 140. The obstetrician wants to proceed immediately to laparotomy but she did want to let you know that the patient has been diagnosed to have HOCM 18 months ago. How would you assess this patient?

Critical Features for the response to Opening Scenario (i.e. Initial assessment of patient)

1. emergent case with full stomach;
2. hypovolemia;
3. HOCM: dynamic obstruction - low LVEDV and tachycardia worsen obstruction; bonus points if understands pathophysiology of MR as a result of systolic anterior motion of anterior mitral leaflet due to Venturi effect and/or redundancy of chordae tendinae with hypertrophy of papillary muscle.

Major points of additional information to be provided to the candidate: Hx, Px, Labs, X-rays, consults etc.

1. echo performed last year showed septum thickness of 21 mm, left ventricular outflow tract gradient of 75 mm Hg;
2. takes verapamil sustained release 120 mg od;
3. no other medical problems, no allergies or other medications;
4. Px: pale, BPs 75, HR 140, slightly obtunded, SpO2 intermittent signal but mid-90s when readable, chest clear, HS normal. Airway normal;
5. Only if asked by candidate, soft II/VI pan-systolic murmur over the apex and radiating into axilla;
6. ECG shows LVH; Hb 75 from 30 min ago; and the remaining blood work unremarkable;
7. What do you need to prepare now before surgery?

Critical Features for the response to Major Points of additional information (i.e. Creation of diff. Dx, treatment plan)

1. Cross & type for packed cells & brought to the OR prior to induction;
2. invasive monitors: arterial line, ? pulmonary arterial catheter (PAC);
3. undue delay would not be appropriate.

Follow-up question, if applicable (new problem, complication)

1. Can you describe your induction?

Critical Features for the response to Follow-up question

1. Cognizant of two conflicting concerns: hypovolemia and HOCM;
2. appropriate dosage of induction agents;
3. vasopressors and β -blockers prepared.