

C-48 Management of a Patient on Intra-aortic Balloon Pump (IABP) Therapy Presenting for Noncardiac Surgery

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Objective

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

- Manage the patient with an intra-aortic balloon pump for non-cardiac surgery.

Case Stem Question

A 62 year old female with a history of hypertension, hyperlipidemia, diabetes mellitus and coronary artery disease presented with a non-ST-elevation myocardial infarction and underwent cardiac catheterization with percutaneous coronary intervention and intra-aortic balloon pump placement for cardiogenic shock. She now presents for emergent exploratory laparotomy after developing severe abdominal pain with imaging significant for pneumoperitoneum.

Guiding Questions for Discussion

How does an intra-aortic balloon pump (IABP) function as a circulatory assist device?

What is counterpulsation?

What are the physiologic effects of IABP therapy?

What are the most common indications for IABP placement? What are some contraindications?

What are common complications of IABP therapy? What are some risk factors?

What preoperative studies are indicated for this patient? What studies would be indicated if this patient presented for non-emergent surgery?

What are the anesthetic goals for patients with ischemic heart disease presenting for noncardiac surgery? What effect does having an IABP have on these goals?

What are your concerns during induction of general anesthesia for this patient?

What are the various trigger modes that can be utilized during IABP therapy? When would you use them?

What is the cause of the IABP waveform abnormality? How can you correct it?

Is there a role for prophylactic IABP placement in high risk patients undergoing noncardiac surgery?

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