

Objectifs pour les équipes résidents

OBJECTIF #1-

Describe the determinants of normal diastolic function and understand its importance in the normal function of the heart, as well as describe conditions associated with abnormal diastolic function + Left sided CHF from diastolic and/or systolic dysfunction

Which provides the earliest indication of intraoperative myocardial ischemia?

- A. Cardiac output
- B. PCWP
- C. Wall motion abnormalities on TEE
- D. Intraarterial pressure
- E. ST segment analysis

Réponse : C

Which of the following is the LEAST LIKELY complication of severe mitral stenosis?

- a. Atrial fibrillation
- b. Pulmonary edema
- c. Myocardial ischemia
- d. Pulmonary hypertension

Réponse : C

OBJECTIF #2-

Describe major cardiac reflex systems, such as the: baroreceptor reflex, chemoreceptor reflex, bainbridge reflex, Bezold-Jarisch reflex, vagal manoeuvres, Cushing's reflex

What is the action of sympathetic nervous system?

- A. constriction of the pupil
- B. contraction of the pylorus
- C. contraction of bladder detrusor
- D. relaxation of pulmonary arterioles

Réponse : B

What cardiac reflex causes hypotension, bradycardia, and coronary vasodilation?

- A. Bezold Jarisch reflex
- B. Bainbridge reflex
- C. Cushing reflex
- D. Lewis reflex

Réponse : A

Which reflex is elicited by stretch receptors located in the wall of the right atrium and the cavoatrial junction?

- a) Chemoreceptor reflex
- b) Bainbridge reflex
- c) Baroreceptor reflex
- d) Bezold-Jarisch reflex

Réponse : B

What is the action of sympathetic nervous system?

- A. constriction of the pupil
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Réponse : B

OBJECTIF #3-

**Demonstrate knowledge and ability to interpret all information from cardiovascular monitors, including their limitations, in determining diagnosis and guiding perioperative management
ECG + 12 lead ECG**

Classic ECG findings in pulmonary HTN include all of the following EXCEPT:

- A. Biphasic p wave in V6
- B. RBBB
- C. Right axis deviation
- D. Right ventricular hypertrophy
- E. P pulmonale (P greater than 2.5 mm)

Réponse : A

Which ECG lead will show no change with left arm lead disconnected

- A. I
- B. II
- C. aVL
- D. aVF
- E. III

Réponse : B

Which lead is positioned at the 4th IC space Left sternal border

- A. v2
- B. v3
- C. v4
- D. v5

Réponse : A

OBJECTIF #4-

Summarize all data to determine the patient cardiac risk and relevant anesthetic considerations

Which of the following would make a patient class IV ASA physical status?

- A. Compound femur fracture
- B. GCS 3 with DIC
- C. Pheochromocytoma
- D. Insulin dependent diabetic with autonomic neuropathy
- E. Crescendo angina

Réponse : E

A 75-year-old patient with IDDM, CAD, and Functional Class I angina is seen in clinic prior to elective aneurysm repair. What test is the best predictor of cardiovascular complications and mortality?

- a. BNP
- b. Functional capacity
- c. Exercise stress test
- d. Dobutamine stress echo

Réponse : A

Which of the following regarding the effects of atrial natriuretic factor is true?

- A. Decreased release with hypervolemia
- B. Renal afferent arteriolar constriction
- C. Decreased SVR
- D. Causes decreased natriuresis/diuresis

Réponse : C

OBJECTIF #5-

Complications of myocardial infarction such as dysrhythmia, VSD, Congestive Heart Failure (CHF), Mitral Regurgitation(MR), Left Ventricular aneurysm, pseudoaneurysm

Ischemia is defined as all of the following except

- A. ST elevation in non-Q wave
- B. downsloping 1 mm
- C. upsloping 2 mm
- D. flattened T wave

Réponse : D

All of the following are hemodynamic goals for severe mitral stenosis EXCEPT:

- A. maintain preload
- B. afterload reduction
- C. decrease pulmonary vascular resistance
- D. slower heart rates

Réponse : B

OBJECTIF #6-

Obstructive (Hypertrophic Obstructive Cardiomyopathy (HOCM) with or without Systolic Anterior Motion (SAM), Dynamic left ventricular obstruction in the elderly) Tako-tsubo or stress-related

Cardioversion is useful in all of the following except:

- A. Multi-focal atrial tachycardia
- B. Paroxysmal atrial tachycardia
- C. Ventricular tachycardia
- D. Atrial fibrillation
- E. Atrial flutter

Réponse : A

A patient with HOCM receives an epidural for post op analgesia, BP decreased to 65/40 and HR goes to 100. Which is the best treatment to give?

- A. Epinephrine
- B. Phenylephrine
- C. Fluid
- D. Dopamine

Réponse : B

All of the following would be negatively affected by increased contractility except:

- A. Mitral stenosis
- B. Mitral valve prolapse
- C. IHSS
- D. Tetralogy of Fallot

Réponse : A

OBJECTIF #7-

Aberrant conduction and acute and chronic dysrhythmia (including atrial fibrillation, supra-ventricular tachycardia, Wolf Parkinson White (WPW))

A patient develops new onset atrial fibrillation post-operatively. What shall you do?

- A. Everyone should get an Echo to rule out thromboembolism.
- B. Amiodarone should be used for a patient with structural cardiac disease.
- C. No cardioversion if it's a new onset WITHIN the last 48 hours.
- D. If patient becomes hemodynamically unstable, proceed with pharmacological cardioversion.

Réponse : B

OBJECTIF #8-

Anatomy and physiology of spinal blood supply

Which aortic surgery has the highest risk for post-operative paralysis due to spinal cord ischemia?

- A. repair of aortic coarctation
- B. thoracic aneurysm repair
- C. thoracoabdominal aneurysm
- D. thoracoabdominal dissection

Réponse : D

OBJECTIF #9-

Physiologic consequences of aortic cross clamping including impact of level of clamping; Implications of clamping at various levels of the aorta; Management of the hemodynamic effects of aortic cross clamping

Which of the following physiologic responses is most frequently observed with cross clamping of the descending thoracic aorta?

- A. Increase in central venous pressure
- B. increase in cardiac output
- C. decrease in pulmonary capillary wedge pressure
- D. decrease in intrathecal pressure

Réponse : A

OBJECTIF #10-

Cardiac transplant

Regarding the transplanted heart:

- A. resting ventricular function is depressed
- B. cardiac output increases faster in response to exercise than a normal heart
- C. lower heart rate at rest
- D. Frank-Starling response is preserved

Réponse: D

Which of the following drugs will increase the heart rate in the transplanted heart?

- A. Norepinephrine
- B. Atropine
- C. Pancuronium
- D. Propranolol
- E. Edrophonium

Réponse: A

Heart transplant patient for ankle # surgery. Which of the following is the most accurate statement?

- A. Supraventricular tachycardia in this patient should be treated with carotid massage
- B. Ephedrine safe in small doses
- C. Epinephrine results in more beta-adrenergic response
- D. Neuraxial good for hemodynamics

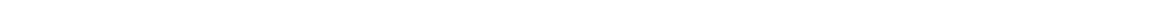
Réponse : C

OBJECTIF #11-
Endocarditis

3y-o female, which one would be an indication for infective endocarditis prophylaxis?

- A. VSD repaired 9 months ago
- B. TOF repaired at the age of 6 month
- C. Tricuspid atresia with a Glenn at age of 6 month
- D. Unrepaired PDA

Réponse : C



OBJECTIF #12-

Monitoring Activated Clotting Time (ACT)

Manage massive transfusions and its inherent complications

What is the most common coagulation defect after CPB?

- A. Reduced thrombin
- B. Defibrinogenation
- C. Decreased levels of V
- D. Platelet dysfunction
- e) Decreased levels of VIIIa

Réponse :D

OBJECTIF #13-

Demonstrate a comprehensive preoperative assessment and optimization of coexisting diseases prior to provision of anesthetic care

A 75-year old patient with IDDM, CAD, and Functional Class I angina is seen in clinic prior to elective aneurysm repair. What test is the best predictor of cardiovascular complications and mortality?

- a. BNP
- b. Functional capacity
- c. Exercise stress test
- d. Dobutamine stress echo

Réponse : A

OBJECTIF #14-

Recent thrombolytic and anti- platelet therapy; Recent Percutaneous Coronary Intervention (PCI) and coronary stent placement

