

Question

Knowledge Test

1. A nurse calls you to the bedside of a 9 year old boy with a heart rate in the 50s. He was just admitted to the floor after being treated for status epilepticus with nasal ativan and has been loaded with Keppra. His blood pressure is 85/55, and he is sleeping. Physical examination reveals good pulses and normal capillary refill. His neurologic examination is within normal limits. EKG reveals sinus bradycardia. What should you do?
 - A. Draw a TSH, T4
 - B. Reassure and continue to clinically monitor
 - C. Give epinephrine
 - D. Give Atropine
 - E. Transcutaneously pace to a ventricular rate of 80 beats per minute.
2. You are called to the bedside of a 3 kg newborn infant who has a heart rate to the 200's. He clinically appears well, afebrile with a respiratory rate of 40 and a blood pressure that of 70/50. He is breathing normally clear lung fields, normal heart sounds, and a capillary refill less than 2 seconds. An EKG shows a narrow QRS tachycardia with 1:1 conduction with retrograde P waves. What should you do next?
 - A. Synchronized cardioversion at 1.5 Joules with a biphasic device.
 - B. Synchronized cardioversion at 3 Joules with a biphasic device
 - C. Adenosine given at 0.3 mg IV rapid bolus
 - D. Apply ice on face for 10 seconds
 - E. Start Amiodarone infusion with a 15 mg load over 30 minutes

Pretest

3. You are called to the bedside of a patient with a heart rate of 250 bpm who looks comfortable. EKG shows narrow QRS with 1:1 P and QRS relationship. What should you do?
 - A. Bolus 20 cc/kg Normal Saline
 - B. Start Adenosine
 - C. Defibrillate
 - D. Synchronize cardioversion
 - E. Try vagal maneuvers
4. You are called to the bedside of a patient with a heart rate of 300 bpm who has poor perfusion. EKG shows narrow QRS with 1:1 P and QRS relationship. What should you do?
 - A. Obtain a chest x-ray
 - B. Start propranolol.
 - C. Defibrillate
 - D. Synchronize cardioversion
 - E. Tilt-table Test

Posttest

5. What is common characteristic for SVT?
 - A. It is usually responsive to furosemide.
 - B. Heart rate slowly increases and slowly decreases
 - C. Calcium Channel blockers are contraindicated for infants < 12 months
 - D. Synchronized cardioversion is usually indicated for SVT with good perfusion.
 - E. Diving reflex is elicited by sternal rub.
6. Wolf Parkinson White Syndrome
 - A. Is characterized by an epsilon wave
 - B. Usually has a long PR interval
 - C. Can result in sudden death

- D. With wall-to-wall heart is classically associated with anomalous left coronary artery to the left pulmonary artery (ALCAPA)
- E. Is a risk factor for atrial flutter.

Answers

1. The answer is B. As the patient is clinically stable, and has a good reason for sinus bradycardia from increased vagal tone, watchful waiting would be a reasonable strategy. Typically sinus bradycardia will resolve as the seizure is controlled.
2. The answer is D. Applying ice to the face simulates the diving reflex. For a patient with an atrioventricular reentrant tachycardia, this may be enough to break the tachycardia. It would be reasonable to start with vagal maneuvers before proceeding to more invasive options in a hemodynamically stable patient.
3. The answer is E. Trying vagal maneuvers is the correct initial management in a stable patient with supraventricular tachycardia. Failure will require additional medical management
4. The answer is D. Synchronized cardioversion is the correct initial management for supraventricular tachycardia with poor perfusion.
5. The answer is C. Calcium Channel blockers are contraindicated for in SVT for infants < 12 months because they can depress cardiac function. This is in contrast to adult management of SVT where calcium channel blockers are readily used.
6. The answer is C. Wolf Parkinson White can result in sudden death, particularly in cases where atrial fibrillation is rapidly conducted across the accessory pathway causing ventricular fibrillation. The typical risk for sudden death is usually quoted at 0.1-0.2% a year.