Cardiac Core Case

Supraventricular Tachycardia 9 b

It's not Gastro – It's SVT!

Pediatric Advanced Life Support

Scenario Lead-In **3 month(s) 6 Kg/ Pink (6-7 kg)**

Prehospital: NA

ED: You are about to see a 3mo with acute onset respiratory distress and irritability.

General Inpatient Unit: 3 mo male admitted with gastroenteritis, has new onset respiratory distress and irritability.

ICU: NA

EVALUATE – Initial Impression	IDENTIFY	INTERVENE
Consciousness • Awake, alert, appears anxious and irritable *Breathing* • Shallow respirations *Color* • Mottled *Pulses* • Too fast to count	• Respiratory distress • Possible shock	• Activate emergency response system, if appropriate. • **Directs assessment of airway, breathing, disability, and exposure, including vital signs** • **Directs administration of supplementary oxygen.** • **Directs placement of pads/leads and activation of monitor.** • **Directs placement of pulse oximeter.** • Determine patient weight for electrical or pharmacologic doses.
EVALUATE – Primary Assessment	**IDENTIFY**	**INTERVENE**
• **A**irway - Clear • **B**reathing – RR - 60 breaths/min, Breath sounds - Clear, equal bilaterallyChoose an item. • **C**irculation – HR - 240 beats/min (peds SVT), BP 76/50, mottled, CR 4 secondsChoose an item. • **D**isability - Irritable • **E**xposure - Temp - 36 C	• Respiratory distress • ST vs. SVT	• Analyze cardiac rhythm (SVT with poor perfusion)
EVALUATE – Secondary Assessment	**IDENTIFY**	**INTERVENE**
SAMPLE history • **S**igns and symptoms: awake and anxious, diaphoretc, rapid breathing • **A**llergies: None known • **M**edications: Family can't remember name of his cardiac med. They are on vacation and left his med at home b/c they were late to the airport. • **P**ast medical history: Ex 30 week preemie, Hx of ASD repair. Followed by a cardiologist • **L**ast meal: 2 oz of formula 6 hours ago • **E**vents (onset): Parents noted he became sweaty, irritable, and started having some resp distress shortly after recent feed **Physical Examination** after oxygen, vagal maneuvers, first dose of adenosine • Repeat VS • Repeat vital signs: HR - 240 beats/min (peds SVT), RR -50 breaths/min, SpO_2 100% on 100% oxygen, BP – 75/45mm Hg • Head, eyes, ears, nose and throat/neck: normal • Heart and lungs: tachycardic, no murmur, lungs clear without crackles, shallow tachypnea	• Respiratory distress • SVT	• **Directs performance of appropriate vagal maneuvers** (ice to face, sparing nose or mouth). • **Directs vascular access (IV/IO).** • **Directs preparation and administration of appropriate doses of adenosine** (0.1 mg/kg, .6mg, 0.2 mL) and saline flush. • Administer adenosine IV/IO by rapid bolus followed by rapid saline flush. • If no response to initial adenosine dose, consider and prepare for second dose of adenosine (0.2 mg/kg, 1.2 mg, 0.4 mL) followed by saline flush. • **Directs reassessment of patient in response to treatment.** • Prepares for and **verbalizes indications and appropriate energy doses for synchronized cardioversion** at O.5 – 1 J/kg (3-6

• Abdomen**: Liver edge palpable 3 cm below right costal margin;** • Extremities: Capillary refill 3 seconds • Back: normal • Neurologic: fussy, irritable		Joules, set defib to 3 or 6 Joules) if no response to adenosine or if patient becomes unstable**.** • After rhythm conversion, monitor for signs of heart failure.
EVALUATE – Diagnostic Tests (Perform throughout evaluation of patient as appropriate)	**IDENTIFY/INTERVENE**	
Lab data (as appropriate) • Blood gas, BMP, glucose POC, consider lactate Imaging • CXR • EKG	Lab tests pending - focus is on converting rhythm back to normal sinus rhythm.	
Re-evaluate-identify-intervene after each intervention		

Debriefing Tool

Scenario: SVT

Instructions

- Debriefings are 10 minutes long.
- Use the table below and the Team Dynamics Debriefing Tool to guide your debriefing.

Scenario Specific Learning Objectives	Critical Performance Steps
• Identifies SVT • Applies the Pediatric Tachycardia with a Pulse and Adequate Perfusion Algorithm • Describes potential vagal maneuvers • Uses the proper technique in giving adenosine (rapid IV push followed immediately with rapid saline flush) • Recalls that synchronized cardioversion should be considered first for SVT in the unstable patient without vascular access • Performs pediatric electrical cardioversion if needed, including synchronized mode and proper doses	• Directs assessment of ABCDE and vital signs • Directs administration of oxygen • Directs placement and activation of cardiac monitor pads/leads and pulse oximetry • Recognizes narrow-complex tachycardia, distinguishes between ST and SVT • Categorizes as compensated or hypotensive • Directs performance of appropriate vagal maneuvers • Directs IV or IO access • Directs preparation and administration of appropriate dose of adenosine • Directs reassessment of patient in response to interventions • Verbalizes indications and appropriate energy doses for synchronized cardioversion