CCT: NEONATAL SUPRAVENTRICULAR TACHYCARDIA

PURPOSE
A. This policy provides guidelines for the management and treatment of infants with SVT.

SCOPE
A. This guideline applies to all members of the Indiana University Health Lifeline Critical Care Transport Team.

EXCEPTIONS
A. Any exceptions to this policy must be approved by the Neonatal Control Physician.

DEFINITIONS
Supraventricular Tachycardia (SVT): The most common type of arrhythmia seen in neonates with a ventricular rate of 180-300 beats/min and a narrow QRS complex.

GUIDELINES
A. Patients transported with SVT should be placed on the Zoll monitor at all times during the transport.
B. Once on the Zoll, a rhythm strip should be printed and then once again during adenosine administration (if applicable) and prior to safe hand-off.

PROCEDURES
A. Hemodynamically stable SVT (normal saturations, perfusion and normotensive)
   1. Perform vagal maneuver by placing bag filled with ice and cold water to face (avoiding nose and mouth) for 15-30 seconds. This can be repeated once.
   2. If patients remains in stable SVT, consider administration of adenosine after discussion with control physician.
      a. Adenosine 0.1 mg/kg IV rapid push (max dose of 6 mg).
      b. If unsuccessful, consider adenosine 0.2 mg/kg IV rapid push (max dose of 12 mg).
B. Adenosine Administration:
   1. Administer as a rapid IV bolus over 1 to 2 seconds.
   2. Infuse directly into a vein or as close to the patient as possible.
   3. Follow with a rapid saline flush of 5 to 10 mL after each bolus.
C. If a saw tooth EKG pattern in noted during adenosine administration, consider possibility of atrial flutter.
D. If adenosine is not effective in converting SVT rhythm, consider Wolf-Parkinson-White (WPW) syndrome.
E. Hemodynamically Unstable SVT (hypotensive, desaturations, poor perfusion, decreased level of consciousness).
   1. Perform synchronized cardioversion after discussion with control physician.
   2. If patient has not converted after synchronized cardioversion, contact control physician.

F. Synchronized Cardioversion:
   1. Consider sedation if able.
   2. Place patient on Zoll Monitor if not on already.
   3. Run rhythm strip to document SVT.
   4. Turn dial on Zoll to defibrillate.
   5. Place Zoll in sync mode.
   6. Begin at 0.5 joules/kg for initial attempt.
   7. Charge Zoll.
   8. Deliver shock; Zoll will hold shock until appropriate timing in the cardiac cycle.
   9. If patient remains in SVT, set to 1 joule/kg and repeat steps; may increase to max of 2 joules/kg after discussion with control physician.

DOCUMENTATION
   A. Rhythm strips as stated above, attached to electronic chart.
   B. Dosing of adenosine given and administration times.
   C. Clinical observations supporting need for cardioversion.

REFERENCES/CITATIONS


