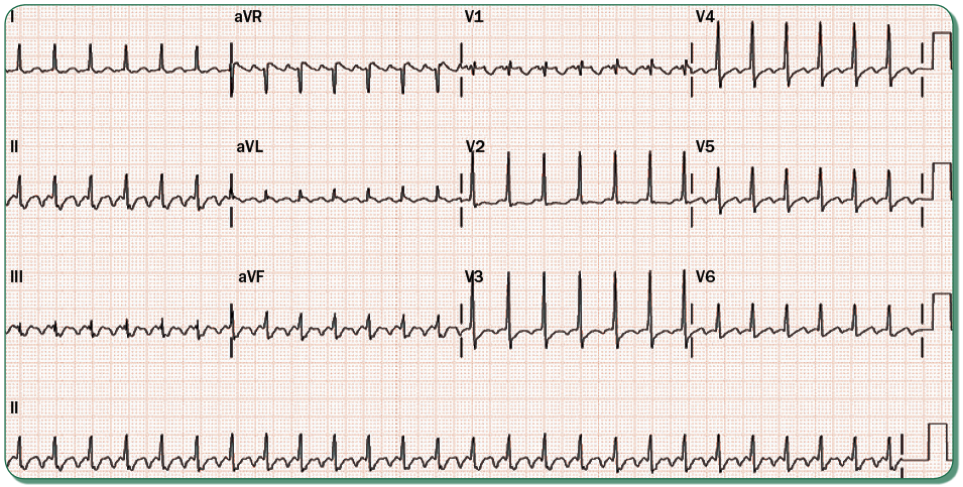
SVT

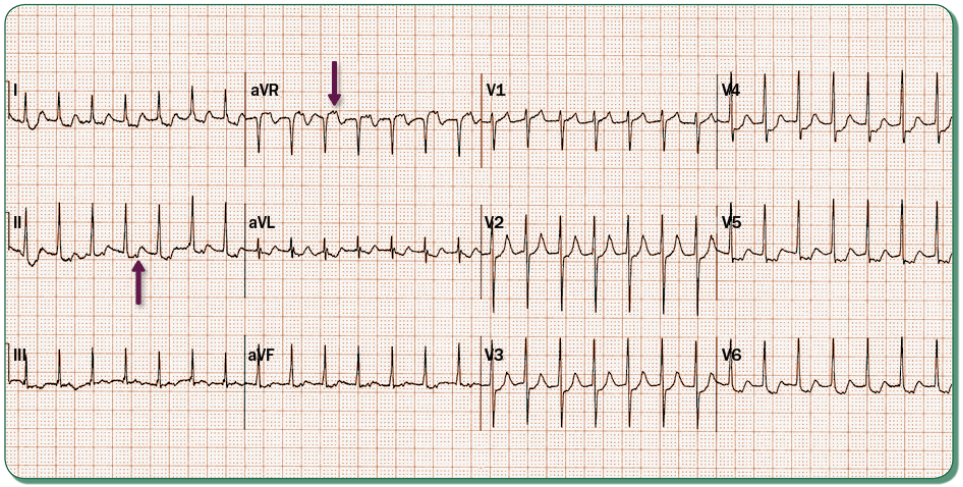
SUPRAVENTRICULAR TACHYCARDIA (SVT) TOOLKIT:
Diagnosis and Treatment Tool
Based on the ACC/AHA/HRS Guideline for the Management of Patients With SVT

TYPICAL ATRIAL FLUTTER



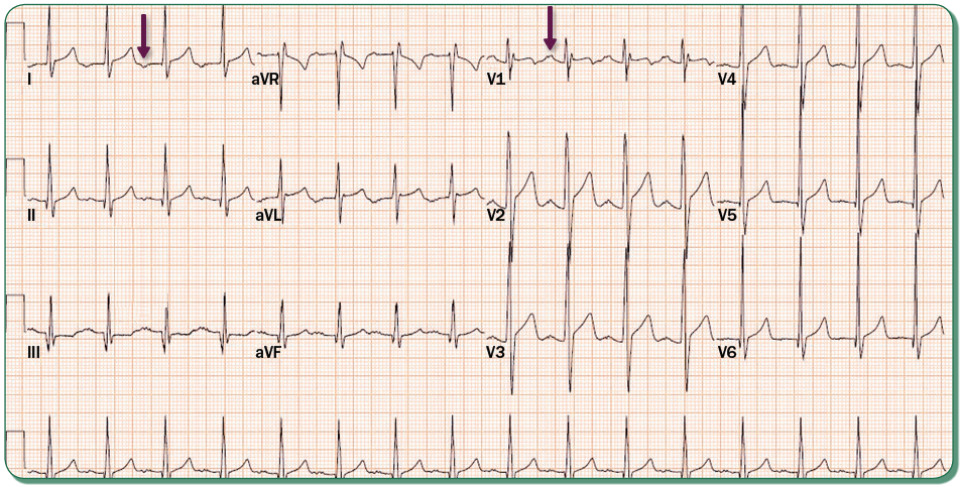
Typical atrial flutter is caused by reentry around the tricuspid annulus , characterized by a "sawtooth pattern" on the ECG produced by the atrial flutter waves; often there is 2:1 conduction to the ventricle, giving a ventricular heart rate of approximately 150 BPM (as in this ECG). Typical atrial flutter is characterized as a macro-reentrant counterclockwise circuit in the right atrium resulting in the surface ECG pattern. The flutter waves are best seen in the inferior leads: II, III and aVF.

ORTHODROMIC ATRIOVENTRICULAR RE-ENTRANT TACHYCARDIA



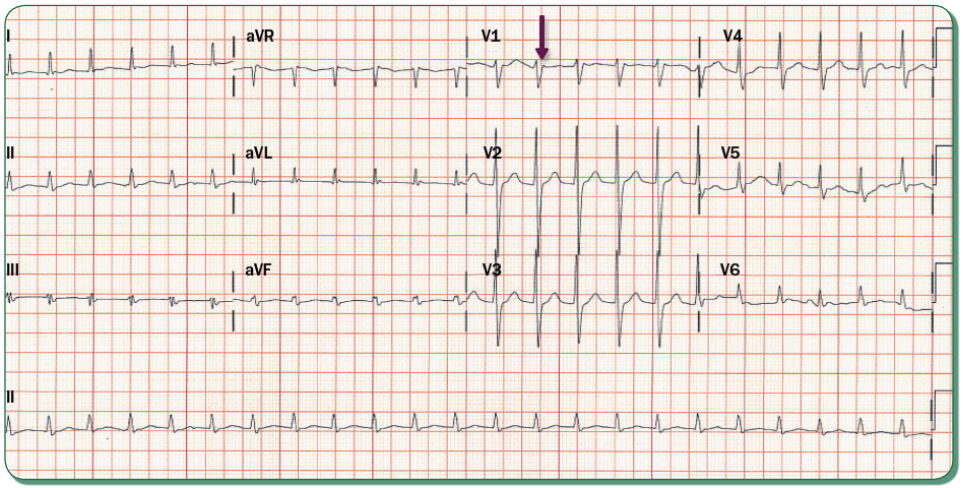
The re-entrant circuit involves conduction anterograde over the atrioventricular node, then retrograde over an accessory pathway; typically this results in a retrograde P wave with a short R-P interval, although usually longer than that seen in typical AVNRT. The arrows point to the P waves that are inscribed in the ST segment following the QRS complex.

ATRIAL TACHYCARDIA



The rhythm results from an atrial focus (reentrant or otherwise) that may be located in either atrium. The arrows point to the P wave that is inscribed before the QRS complex. This is typically reflected on the ECG as a long R-P tachycardia, although the R-P timing may vary depending on AV nodal conduction during tachycardia.

TYPICAL AVNRT



The re-entrant circuit involves conduction anterograde over a slow atrioventricular node pathway followed by retrograde conduction over a fast atrioventricular node pathway. The arrow points to the P wave that is inscribed at the end of the QRS complex, giving a slightly positive R' (pseudo r prime) in lead V1. This is a type of short R-P tachycardia.

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HOW TO DIAGNOSE SVT

Patient Symptom Characteristics:

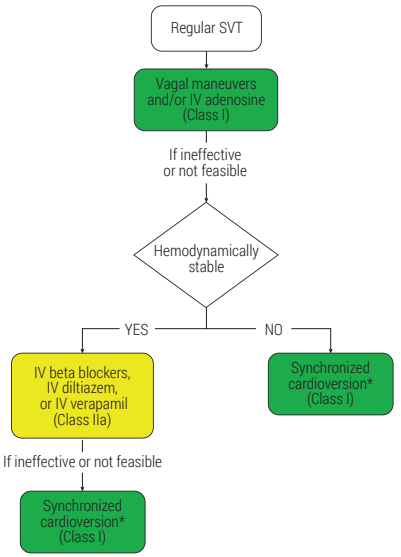
1. Sudden onset and termination? ➡Suggests PSVT
2. "Shirt flapping" or "neck pounding"? ➡Suggests AVNRT
3. Hypotension or history of syncope or presyncope? ➡Indicates that SVT is poorly tolerated and suggests need for treatment and referral to a specialist.
4. Presence of underlying structural heart disease? ➡Suggests atrial tachycardia
5. Evidence of preexcitation on the ECG? ➡Recommend referral to an arrhythmia specialist for WPW.

HOW TO TREAT SVT

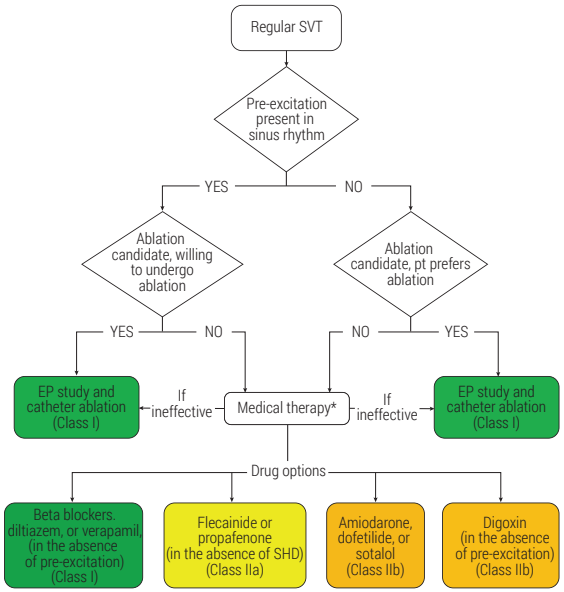
Patient Treatment Considerations:

6. How disruptive are the patient's symptoms?
   - **a. Mild:** patient overall not worried about diagnosis; has very infrequent events; has not experienced syncope or presyncope.
   - **b. Moderate**: patient experiences some anxiety due to symptoms and perceived symptoms; may have experienced presyncope; minimal limitations to lifestyle.
   - **c. Severe:** patient is very anxious, with or without recurrent symptoms; has experienced syncope; significant limitations in lifestyle or high risk profession.
7. Patient preference and comfort level with taking drugs versus invasive procedures.
8. Patient ability and interest to self-manage with conservative approach, such as vagal maneuvers and "pill-in-the-pocket" drug therapy.
9. Cost considerations, including upfront cost for invasive procedures versus long term costs of medical therapy.

ACUTE TREATMENT OF SVT OF UNKNOWN MECHANISM



ONGOING MANAGEMENT OF SVT OF UNKNOWN MECHANISM



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