Understanding Supraventricular Tachycardias

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Understanding SVT

• Disclosures:
  • Speakers Bureau – Boston Scientific, Biotronik, Boehringer Ingelheim
  • Research – Boston Scientific, Biotronik
Understanding SVT

• Goals:
  • Understand different mechanisms of SVT
  • Differentiate SVT based on ECG clues
  • Understand therapies for the various SVT’s
Types of SVT

- AV nodal reentrant tachycardia (70%)
- AV reentrant tachycardia (20%)
- Atrial tachycardia (9%)
- Junctional tachycardia (1%)
- Atrial Flutter
- Atrial Fibrillation
Long RP vs Short RP
AVNRT
AVRT
Atrial Tachycardia
Atrial Tachycardia
Understanding SVT
Understanding SVT - Linkage
Junctional Tachycardia
Long RP vs Short RP

AVNRT  
Junctional Tachycardia

AVRT  
Atrial Tachycardia
Atrial Flutter

- Typical
  - Counterclockwise/clockwise
- Atypical
Atrial Flutter

- 140-160 bpm
Atrial Flutter - Typical

V1

II,III,AVF
Atrial Flutter - Typical
Atrial Flutter
Atrial Fibrillation
Atrial Fibrillation
Atrial fibrillation
Treatment

• Beta blockers
• Calcium Channel blockers
• Antiarrhythmic Medications
  • Atrial fibrillation – Amiodarone, Sotalol, Dofetilide, Flecainide, Propafenone
  • AVRT – Flecainide, Propafenone, Amiodarone
Antiarrhythmics

• Sodium Channel Blockers
  • IA – Disopyramide, Quinidine, Procainamide
  • IB – Mexiletine, Lidocaine
  • IC – Flecainide, Propafenone

![Diagram of Action Potential and ECG](image)
Antiarrhythmics

- Potassium Channel Blockers
  - Amiodarone
  - Sotalol
  - Tikosyn (Dofetilide)
  - Dronedarone
Conclusion

- Mechanisms of SVT are few and simple
- Look for Clues with Long RP – Short RP
- Treatment is similar
- Know what is easy to ablate
- Thanks!