

**Heart Disease:  
*The Number One Health  
Problem for Women***

**Satellite Conference  
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Produced by the Alabama Department of Public Health  
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**Objectives**

- To review new information regarding estrogen replacement and risk of CHD and stroke in women.
- To review coronary artery disease in women including the different presentation symptoms and the various responses to therapy.

**Objectives**

- To review the evaluation and treatment of cardiac arrhythmias in women.
- To review the modification of risk factors for coronary heart disease in women.

**Arrhythmias in Women**

**Sharon M. Dailey MD FACC  
Associate Professor of Medicine**

## There Really Are Gender Differences In Arrhythmias

- Resting HR in women is higher.
- Corrected QT interval is longer in women.
- Higher female incidence of certain genes for long QT syndrome.
- Higher female incidence of AVNRT vs WPW.
- Risk of torsades de pointes higher with antiarrhythmic drugs in women.

## Basis For Gender Differences Unclear

- Autonomic tone differences
  - women may have higher baseline sympathetic tone
- Hormonal effects
  - menstrual cycle effects
  - pregnancy
- Ion channel differences

## Do Women Perceive Arrhythmias Differently From Men?



## Evaluation of Patients with Palpitations

- Symptoms and associated circumstances
  - Detailed history
- Diagnostic evaluation
  - Physical exam
  - Diagnostic testing
  - Ambulatory monitoring devices
- Management

## Flip-Flopping

- Heart seems to stop and start causing pounding or flipping sensation.
- Usually caused by PACs or PVCs.
- Pause following ectopic beat causes sensation that heart has stopped and pounding or flipping caused by forceful contraction after ectopic beat.

## Rapid Fluttering

- Can result from any sustained tachycardia - VT, SVT, sinus tachycardia.
- Patients can sometimes see shirt moving rapidly.
- Sinus tach often occurs with activity and resolves gradually with rest in deconditioned patients. SVT or VT will stop suddenly if spontaneously terminating.

### **Pounding In The Neck**

- Usually caused by AV dissociation
  - Reentrant SVTs (AVNRT or WPW)
  - Ventricular tachycardia or sometimes PVCs
- Cannon A waves can be seen
- Feeling of being unable to catch one's breath

### **Circumstances**

- Anxiety or panic reactions
- Periods of catecholamine excess
- Associated with position
- Associated with syncope or near-syncope
- Poor sleep, bad habits
  - excess caffeine, alcohol, drugs (even otc)

### **Anxiety Or Panic**

- Cause or effect?
- Average of 3.3 years between onset of symptoms and diagnosis of SVT due to meeting DSM criteria for panic disorder (67%).
- Diagnosis of panic should not be accepted until true arrhythmic cause excluded.

### **Catecholamine Excess**

- Idiopathic ventricular tachycardias particularly RVOT
- Atrial fibrillation
- Torsades with startling
- Inappropriate sinus tachycardia

### **Palpitations Associated With Position**

- Patients with AVNRT may notice onset when standing up after bending over.
- PVCs and PACs are more noticeable when lying in bed, since they are often more frequent with slower heart rates.

### **Palpitations Associated With Syncope**

- Should prompt a search for ventricular tachycardia
- Not common, but can occur with SVT particularly at onset of tachycardia likely due to acute vasodilatation, rapid HR with low CO

### **Diagnostic Evaluation Detailed History**

- **Age of onset**
  - Childhood or adolescent onset suggests WPW, perhaps AVNRT, idiopathic VT, long QT
  - Atrial tachycardias or afib generally later onset
- **Description of palpitations**
  - helpful to have patient tap out rhythm with fingers

### **Diagnostic Evaluation Detailed History**

- **Mode of onset and termination**
- **Complete ROS and social history**

### **Diagnostic Evaluation Physical Exam**

- **Helps define cardiac abnormalities that can serve as substrate for arrhythmias**
  - murmur of IHSS
  - S3 gallop, displaced PMI, elevated JVP
  - echocardiogram to confirm

### **Diagnostic Evaluation Physical Exam**

- **Seldom will exam occur during episode of palpitations (except in ER) but findings such as irregularly irregular rhythm may be present (afib)**

### **Diagnostic Evaluation 12 Lead ECG**

- **Short PR and delta wave (WPW)**
- **Marked LVH, deep septal Q waves in I, AVL, V4-6 (IHSS)**
- **LAE - substrate for afib**
- **Q waves characteristic of prior MI - possibility of VT**
- **Long QT, findings of Brugada syndrome**

### **Diagnostic Testing Who Should Have?**

- **Initial evaluation suggests an arrhythmia.**
- **Patients at high risk for an arrhythmia**
  - organic heart disease or abnormality that can cause serious arrhythmias
  - strong family hx of sudden death
- **Anxious patients who want explanation for their symptoms**

### **Ambulatory Monitoring Devices**

- Holter monitor
  - 24-48 hrs. Saves data continuously. Not good if infrequent symptoms.
- Event recorders
  - “Beeper” - records in real time when pt activated.
  - “Looper” - records few minutes before and after patient activated (continuous-loop).
  - Can use for one month.

### **Management**

- Referral of most sustained arrhythmias to an electrophysiologist either for drug or ablation/device therapy
- PACs, PVCs
  - Reassurance
  - Beta-blocker therapy
  - Avoid antiarrhythmic drug therapy
  - Lifestyle modification (*i.e.*, caffeine, sleep, stress)

### **Inappropriate Sinus Tachycardia**

- Diagnosis made only when causes such as hyperthyroidism, anemia ruled out.
- Beta blockers, calcium channel blockers first line of therapy.
- Sinus node modification often an unrewarding form of therapy.

### **Summary**

- The cause of palpitations in the vast majority of outpatients is benign, therefore extensive and costly investigation isn't warranted *but*
- Patients may desire a specific diagnosis for their symptoms
- Most important to identify those at high risk for serious causes of palpitations