

Sick Sinus Syndrome, Sinus Node Dysfunction

The sinoatrial (SA) node, situated in the right atrial wall, is the pacemaker of the heart. The normal SA node controls heart rate, using signals from the autonomic nervous system.

Malfunction of the SA node is termed sick sinus syndrome (SSS) or sinus node dysfunction (SND). SND can be due to heart disease or extrinsic factors (e.g. medication side effect). Sometimes, the cause is unknown. It is most common in older persons, probably due to fibrosis in the SA node and/or conduction system. CAD is often a co-morbid condition rather than the cause.

Diagnosis is made by ECG abnormalities and ambulatory monitoring. The malfunction may be intermittent and the symptoms variable; definite diagnosis can be elusive. Clinicians are inconsistent in their use of the terms and the criteria for diagnosis.

SND often presents as a heart rate that is inappropriately slow (bradycardia). It can also present as inappropriately fast (tachycardia) or as alternating too fast and too slow (*brady-tachy syndrome*). A previously asymptomatic bradycardia may deteriorate into a syndrome of supraventricular arrhythmia, which may include atrial fibrillation/flutter (AF) or brady-tachy syndrome. SND that causes brady-tachy syndrome or AF has increased mortality, primarily due to stroke.

Symptomatic bradycardia (associated with dizziness or fainting) and some asymptomatic very slow rates are treated with a mechanical pacemaker. Tachycardia is treated with medication to slow the heart rate. Both medication and a pacemaker may be required to manage the arrhythmias.

If your client has had sick sinus syndrome/sinus node dysfunction, please answer the following:

1. How long has this abnormality been present? _____ (years)

2. Is a cardiac pacemaker present?

Yes ____ No ____

3. Have any of the following occurred?

Chest pain Yes ____ No ____

Fainting/dizziness Yes ____ No ____

Trouble breathing Yes ____ No ____

Heart failure Yes _____ No _____

Palpitations Yes _____ No _____

Atrial fibrillation/flutter Yes _____ No _____

4. Is there a history of other heart or vascular disease present (strokes, transient ischemic attacks, valve problems, coronary artery disease, etc.)?

Yes, please give details

5. Have additional studies been completed? (check all that apply)

Echocardiogram _____ (date) Cardiac catheterization _____
(date)

6. Is your client on any medications?

Yes, (details) _____

7. Has your client smoked cigarettes or any other tobacco products in the last 5 years?

Yes _____ No _____

8. Does your client have any other major health problems (ex: cancer, etc.)?

Yes, (details) _____