

Approach to palpitations Clinical Guidelines

Definition

Palpitations are one of the most common presentations to general practice. Patients describe it as a noticeable awareness of their heart beats.

The description of the sensation itself may be that of a “flutter,” “fliflop,” “pounding,” or “skip.” It may be fast, slow, regular, or irregular.

Assessment (History and Examination)

It can be due to cardiac (arrhythmia or non-arrhythmia) causes, or non-cardiac causes

Differential Diagnosis of Palpitations

Arrhythmias

Atrial fibrillation/flutter
Bradycardia caused by advanced arteriovenous block or sinus node dysfunction
Bradycardia-tachycardia syndrome (sick sinus syndrome)
Multifocal atrial tachycardia
Premature supraventricular or ventricular contractions
Sinus tachycardia or arrhythmia
Supraventricular tachycardia
Ventricular tachycardia
Wolff-Parkinson-White syndrome

Psychiatric causes

Anxiety disorder
Panic attacks

Drugs and medications

Alcohol
Caffeine
Certain prescription and over-the-counter agents (e.g., digitalis, phenothiazine, theophylline, beta agonists)
Street drugs (e.g., cocaine)
Tobacco

Nonarrhythmic cardiac causes

Atrial or ventricular septal defect
Cardiomyopathy
Congenital heart disease
Congestive heart failure
Mitral valve prolapse
Pacemaker-mediated tachycardia
Pericarditis
Valvular disease (e.g., aortic insufficiency, stenosis)

Extracardiac causes

Anemia
Electrolyte imbalance
Fever
Hyperthyroidism
Hypoglycemia
Hypovolemia
Pheochromocytoma
Pulmonary disease
Vasovagal syndrome

NOTE: The categories of palpitations are arranged from most common to least common; within the categories, conditions are listed in alphabetical order.



History taking

A Thorough history is essential given the overwhelming majority of patients will present in sinus rhythm, between episodes of arrhythmia.

Palpitations are subjective so it is important to clarify whether the patient's symptoms palpitations rather than other non-arrhythmic cardiac symptom (eg chest pain, shortness of breath, pre-syncope) or even a non-cardiac symptom.

Once clarified, the history should focus on the nature of the symptoms and circumstances around the time of the palpitations.

Key questions in history-taking

- Onset and offset: sudden or gradual
- Duration: momentary or sustained (how long?)
- Frequency
- Triggers (frequently may not be obvious)
- Associated symptoms
- Pre-syncope/syncope
- Breathlessness
- Chest pain (possibly ischaemic in nature)
- Existing cardiac conditions

Systems review

Review of systems should cover symptoms of the causative disorder:

- Heat tolerance, weight loss and tremor (hyperthyroidism).
- Chest pain and dyspnea (cardiac ischemia)
- Fatigue, weakness, heavy vaginal bleeding and dark tarlike stool (anemia)

Past medical history

The known potential causes, including documented arrhythmias and heart or thyroid disorders, should be identified.

Medication history

- A history of all prescription and over-the-counter medications for example, nasal decongestants, herbal preparations and supplements, such as omega-3 polyunsaturated fatty acids, should be obtained.
- Medications used to treat attention-deficit/hyperactivity disorder.
- Reliever inhalers for asthma may cause palpitations.
- The drug profile should be reviewed for offending prescription drugs (e.g. antiarrhythmics and digitalis).

Family and social history

Occurrences of syncope or sudden death at an early age should be noted.

The patient's social history such as tobacco use, exercise habits, caffeine consumption (including tea and energy drinks), alcohol and illicit drug use should be explored.



Examination

Examination will also usually be performed in between episodes of arrhythmia, and it should address any cardiac or systemic illness that might be implicated in the development of arrhythmia including

Full vital signs

- Resting heart rate and rhythm.
- Blood pressure
- Temp
- Saturation

General examination

- Weight (obesity may contribute to atrial fibrillation).
- Inspection of the conjunctivae, palmar creases, and buccal mucosa for pallor.
- Signs suggestive of hyperthyroidism, such as exophthalmos, thyroid enlargement, tenderness, or tremors).
- Check for mydriasis (consider stimulants if hypertension, tachycardia, mydriasis, behavioral changes).
- Behavioral changes psychomotor retardation or agitation.

Cardiopulmonary examination

- Signs of heart failure
- Evaluate signs of cardiomyopathy.
- Cardiac murmurs (valvular heart dis), evaluate while standing and while squatting.
- Evaluate for mid systolic click.
- Examination of the jugular venous pulse waves is a useful and important element of the physical examination.

Thyroid examination

- Exophthalmos
- Resting Tremors
- Thyroid swelling or tenderness

Neurological examination

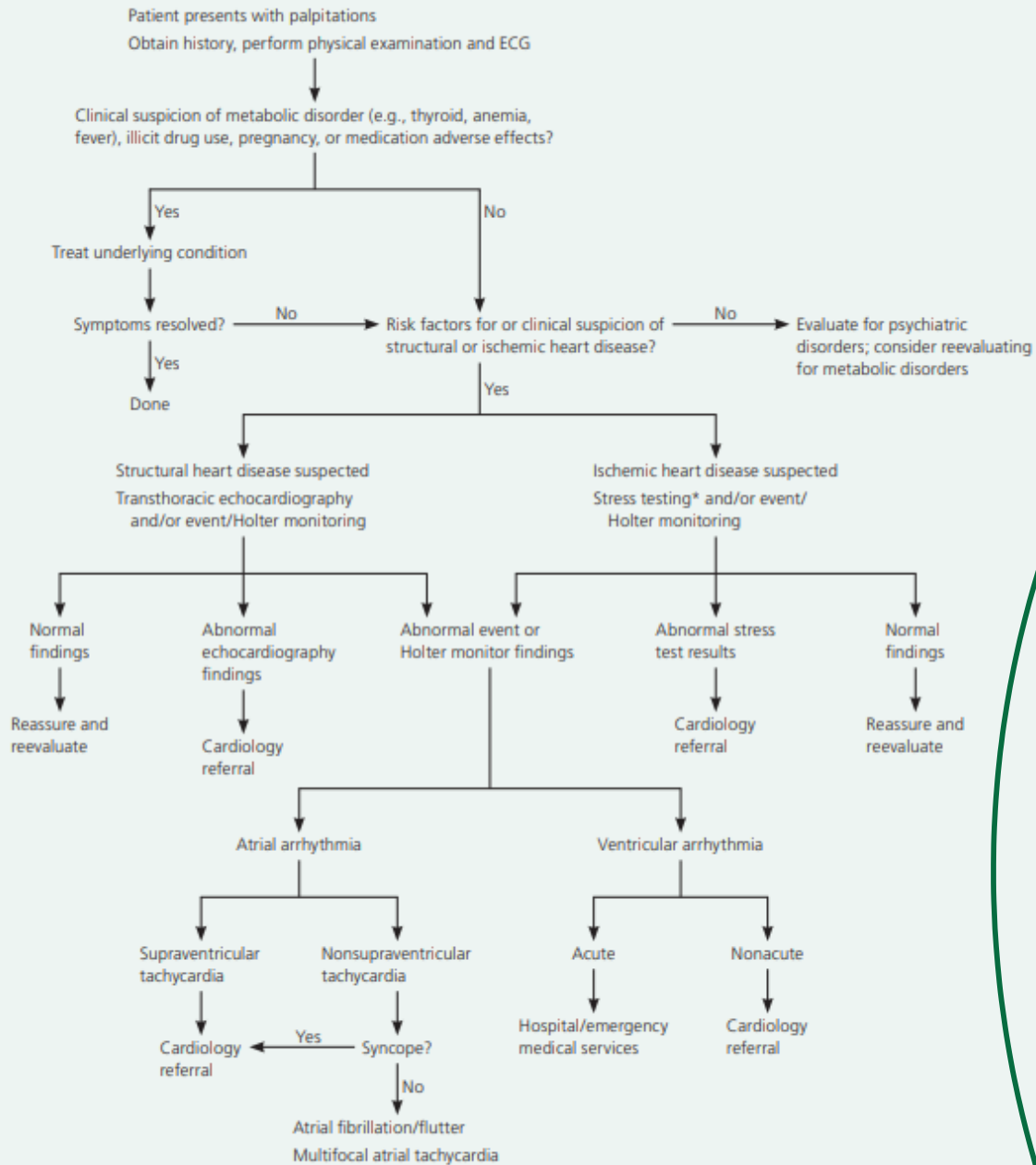
Evaluate whether resting tremors or brisk reflexes are present (suggesting excess sympathetic stimulation).

An abnormal neurologic finding could suggest that seizures rather than a cardiac disorder may be the cause of syncope and is one of the symptoms.



Management

Assessment of Palpitations



*—Stress testing with imaging is preferred over stress ECG. However, many payers will not approve stress testing with imaging unless ECG results are abnormal. Stress test results can be normal in patients with underlying disease; in these cases, some payers will allow only regular stress ECG.



Diagnostic work-up

The gold standard diagnostic technique for a patient with palpitations is to be monitored using a 12-lead electrocardiogram (ECG) at the time of symptoms. However, due to the transitory nature of arrhythmia, this method tends to be the exception rather than the rule

Ambulatory electrocardiographic monitoring

- Holter monitor for 24_48 hrs.
- Event monitor (external loop recorder for intermittent episode over 1 month) .
- implantable loop recorder hand-held ECG .

Consider additional testing when it IS indicated as:

Echocardiogram:

When there is suspected structural cardiac disease .

- Palpitation with cardiopulmonary symptoms.
- Cardiomyopathy findings (led edema, dyspnea, rales)

Stress ECG

- When it is stress induced palpitation.
Electrophysiological studies
- In cases of syncope .
- When life threatening arrhythmias suspected .

Laboratory testing

- Full blood count assessing anemia and infection.
- serum urea, creatinine and electrolytes assessing electrolytes and renal function.
- Thyroid function tests are indicated when atrial fibrillation is newly diagnosed or there are symptoms of hyperthyroidism.
- Cardiac markers (e.g. troponin and creatinine kinase) should be measured in patients with ongoing arrhythmias, chest discomfort or other symptoms, suggesting recent coronary ischemia, myocarditis or pericarditis.



Management of patients with palpitations

- Treat the underlying cause of palpitations.
- Precipitating drugs and substances are stopped.
- If a necessary therapeutic drug causes dangerous or debilitating arrhythmias, a different agent should be tried.
- **For isolated PACs and PVCs in patients without structural heart disease**
simple reassurance and support are appropriate as they are thought to be benign. A medical practitioner should address common risk factors and triggers and promote lifestyle changes to lower stress, stop smoking, and cut back on caffeine and alcohol.
- For otherwise healthy patients in whom these phenomena are disabling, a β - blocker such as propranolol or metoprolol or calcium channel blocker such as verapamil can be given.
- **For patients with a suspected or documented SVT**
Educate them regarding the use of the Valsalva maneuver used to terminate arrhythmias.



APPROVL			
	Name:	Position:	Signature:
Prepared By:	Dr. MennatAllah Samy	FM Senior Registrar	
Reviewed and Approved By:	Dr. Mansoor Allajhar Dr. Musa Althwayee Dr. Ahmed Al Zahrani Dr. Hajar Al Suma Dr. Ahlam Al Harbi	FM Consultants	

Adopted from:

- AAFP
- Uptodate
- Medscape
- Royal Australian College of General Practioners
- Family Practice Notebook

