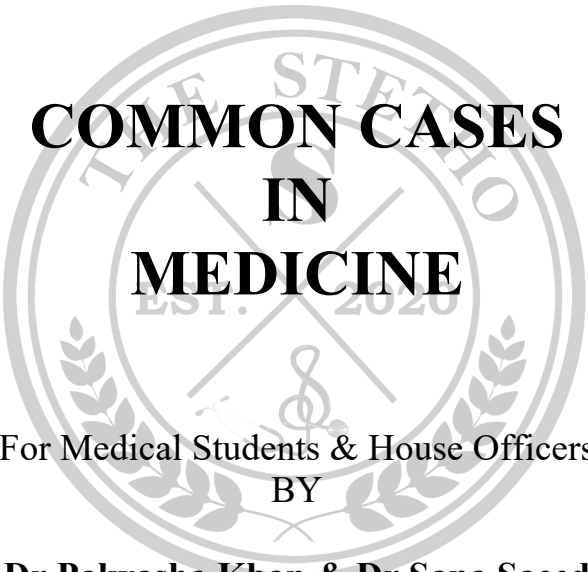




COMMON CASES IN MEDICINE

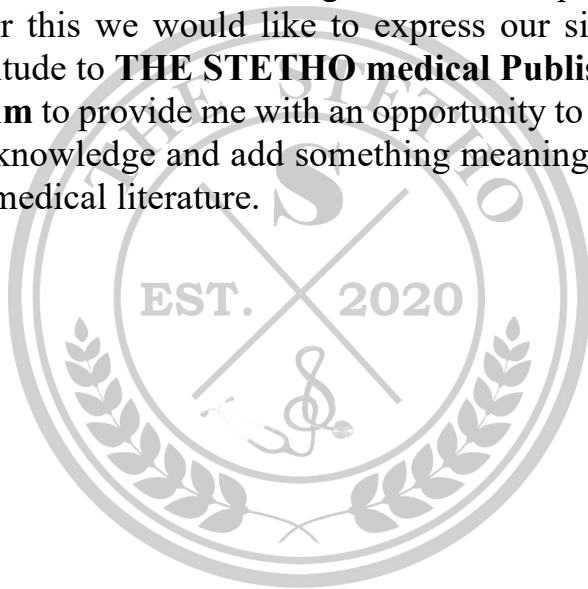
For Medical Students & House Officers
BY

Dr Palwasha Khan & Dr Sana Saeed

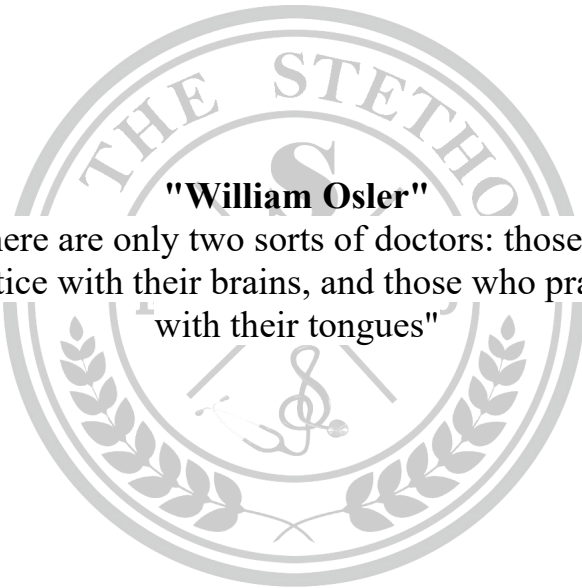


ACKNOWLEDGEMENT

Foremost, we are thankful to God for the good health and wellbeing that were necessary to complete this Book and present a clear picture of what has been done during the book completion. After this we would like to express our sincere gratitude to **THE STETHO medical Publishing forum** to provide me with an opportunity to share my knowledge and add something meaningful to the medical literature.



Dr Palwasha Khan & Dr Sana Saeed



"William Osler"

" There are only two sorts of doctors: those who practice with their brains, and those who practice with their tongues"



CASE 1

A 70 YEARS OLD WOMAN WITH PROGRESSIVE DYSPHAGIA

Scenario: A 70 years old lady visits your clinic for complaints of heartburn and reflux that has progressed over the last four months but it has now become difficult for her to swallow certain foods now. She is at your clinic for further evaluation.



HISTORY

1. Level of Dysphagia: As a physician your primary concern in this patient should be to identify the level of dysphagia.

- Oropharyngeal Dysphagia: This level of dysphagia manifests as a difficulty to initiate swallowing.
- Esophageal Dysphagia: In this level, the initiation is alright but there is difficulty in swallowing seconds after initiating a swallow.

2. Type of Dysphagia:

- Liquids: A Pharyngeal cause
- Solids: A Mechanical cause
- Solids & Liquids: Esophageal Dysmotility

3. Duration of Dysphagia:

- A short progressive history points towards malignancy.

- Intermittent History of symptoms points to esophageal dysmotility, eosinophilic esophagitis or an esophageal web.
4. Past History of gastro-esophageal reflux (GERD), Barrett's esophagus, peptic stricture or esophageal web.
 5. Past history of systemic sclerosis.
 6. Past history of a neurological disorder.

PHYSICAL EXAM

1. General Examination: Check for dehydration or weight loss. Inspect mouth, teeth and dentures for signs of acid erosion.
2. Abdominal Examination: Inspect and palpate for an abdominal mass and organomegaly.

INVESTIGATIONS

1. Blood Tests:

- Complete Blood Count with Peripheral Smear and Iron Panel (studies).
- Urea and Electrolytes including Calcium
- Liver Function Tests (LFTs)

2. Radiological Investigations:

- Chest X-ray
- Barium swallow
- Upper endoscopy

DIFFERENTIALS

Esophageal Carcinoma

Peptic Stricture

Severe Esophagitis

Esophageal Web.

Schatzki Ring.

Esophageal Dysmotility

MANAGEMENT

The treatment and management should be aimed relieving the symptoms of dysphagia.

1. Surgery: If surgical resection of the tumor is required (In case of Carcinoma).

2. Chemotherapy.

3. Radical Radiotherapy.

4. Palliation of symptoms: The most appropriate treatment in most cases.

- Endoscopic Dilatation of the Malignant Stricture
- Palliative Chemotherapy
- Palliative Photodynamic Therapy
- Palliative Radiotherapy



CASE 2

A 40 YEARS OLD MAN WITH CHEST PAIN

Scenario: A 40 years old teacher visits your ED for complaints of acute chest pain. He has previous such episodes occurring on and off for the last 8 months but this time the pain is persistent for the last 5 hours. He is in the ED for further evaluation.



HISTORY

1. Evaluate Pain: As a physician your primary concern in this patient should be to identify the chest pain of cardiac origin.

- Site.
- Onset.
- Character.
- Radiation.
- Associated symptoms.
- Timing/duration.
- Exacerbating factors.
- Severity.

2. It is important to elicit a prior history of angina. Many patients will describe exertional chest pain in the weeks preceding presentation. With angina or an acute coronary syndrome (ACS) the pain usually builds to a maximum over a few minutes rather than reaching its maximal intensity instantaneously.

3. Pain due to myocardial infarction may be associated with one of following features:

- Sweating.
- Nausea.
- Vomiting.
- Breathlessness.
- Dizziness.

4. A Past Medical History of Stroke, Claudication, Angina or previous Myocardial Infarction.

5. Past history of Hypertension or Chronic Renal Failure.

PHYSICAL EXAM

The presence of a tachycardia and hypertension are not particularly helpful if the patient is in pain or anxious. The clinical examination in patients with angina or ACS is often normal. The following should be looked for:

- Arcus senilis – hypercholesterolemia (in patients under 50 years).
- Fundoscopy – hypertensive changes.
- Xanthelasma – hypercholesterolemia.
- Elevated JVP – heart failure.
- Carotid bruits – high probability of coexisting coronary disease.
- Cardiomegaly – heart failure.
- Hypertrophied apex beat – hypertension or aortic stenosis (AS). • Systolic murmur – AS or hypertrophic cardiomyopathy (HOCM) can give rise to angina.
- Diastolic murmur – aortic regurgitation (AR) associated with a type A dissection.
- Pericardial friction rub – pericarditis.

- Abdominal aorta – aortic bruit or aneurysm associated with generalised vascular disease.
- Femoral arteries/foot - pulses, evidence of peripheral vascular disease associated with coronary disease.

INVESTIGATIONS

1. Blood Tests: The following standard investigations would be helpful:

- Full Blood Count (FBC).
- Electrolytes.
- Blood Glucose.
- Renal Function.
- Thyroid Function.
- Troponin/Creatinine kinase.
- Fasting Lipid Profile and Glucose.

2. Radiological Investigations:

- ECG

- Chest X-ray
- Echocardiogram

DIFFERENTIALS

Angina pectoris

Acute myocardial infarction

Esophageal pain (reflux, spasm, inflammation)

Musculoskeletal

Pulmonary embolic disease

Cervical root compression

Aortic dissection

Chest wall pain

Pancreatitis

Cholecystitis

Anxiety disorders

MANAGEMENT

The treatment and management should be aimed relieving the symptoms of Cardiac Pain and preventing further Myocardial Injury.

- Oxygen.
- Aspirin 300 mg orally, followed by 75 mg daily.
- Sublingual or intravenous GTN if in pain.
- Clopidogrel 300 mg orally, followed by 75 mg daily.
- Low - molecular - weight heparin (weight adjusted).
- Beta blockade.
- IIb/IIIa antagonists.
- Statin therapy.
- Insulin infusion.



CASE 3

A 52 YEARS OLD WOMAN WITH UPPER ABDOMINAL DISCOMFORT

Scenario: A 57 Years Old banker presents with an 11-month history for on and off upper abdominal discomfort. It is progressively worsening in nature. The patient is worried if she has cancer.



HISTORY

1. Take full history of Abdominal discomfort:

- Character, Location, Intensity, Severity, Radiation, Frequency & Associated Factors.

2. Specific aggravating factors:

- Eating, Nocturnal Symptoms (reflux), bending/stooping (reflux) and exertion (cardiac).
- Specific relieving factors include food (peptic ulcer), milk and antacids (reflux, ulcer and non-ulcer dyspepsia).

PHYSICAL EXAM

- Check for anemia.
- Check for weight change.
- Feel for lymphadenopathy, especially supraclavicular lymph nodes of gastric carcinoma (Virchow's node).

INVESTIGATIONS

1. Blood Tests:

- Complete Blood Count

- Liver Function Tests
- C Reactive Protein

2. Radiological Investigations:

- Abdominal Ultrasound
- Barium meal
- Upper endoscopy

MANAGEMENT

1. General measures should be the 1st line of treatment followed by drugs.

2. Dietary Interventions:

- Small & Regular Meals
- Reduce Fatty Foods
- Eat early in the evening

3. Lifestyle Modifications:

- Avoid Coffees and hot beverages
- Raise the head during sleep
- Exercise regularly



CASE 4

A 52 YEARS OLD MAN WITH ATYPICAL CHEST PAIN

Scenario: A 52 Years old man that complains of chest pain related to meals and exertion. The General Practitioner (GP) referred him to a cardiologist to rule out angina. His ECG was normal. The Exercise Tolerance Test was negative for ischemia. He had a diagnostic angiogram with normal coronary arteries but the chest pain persists. A chest X-ray showed normal lung fields and no bony abnormalities. Thyroid function tests and an autoimmune screen were normal. He has been referred to you to exclude a gastrointestinal cause of his chest pain.



HISTORY

Describe the Chest Pain:

- Was the pain retrosternal burning sensation?
- Does the patient feel any acid or reflux in his mouth?
- Is there any bitter taste?
- Is there relief with antacids?
- What is the duration of his symptoms?
- Has he had similar symptoms in the past?
- Did they resolve spontaneously or require treatment?
- What is the frequency and severity of these symptoms?
- Are they getting progressively worse?

PHYSICAL EXAM

- Look for evidence of weight change, especially weight loss.
- Look for conjunctival pallor of anemia.
- Inspect the mouth for evidence of acid erosion on his teeth and smell of halitosis.
- Palpate for cervical lymphadenopathy and goiter of hyperthyroidism.
- Examine the chest for evidence of cardiovascular or respiratory disease.

INVESTIGATIONS

- ECG
- Investigation is only needed in the presence of alarm symptoms or if they are frequent and severe or progressive.

MANAGEMENT

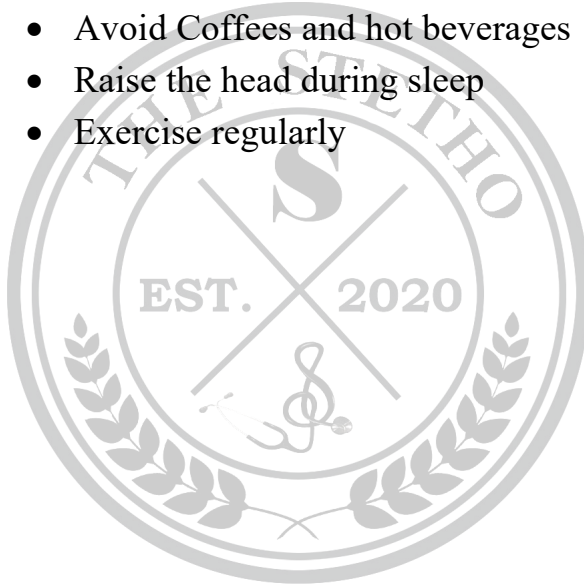
1. General measures should be the 1st line of treatment followed by drugs.

2. Dietary Interventions:

- Small & Regular Meals
- Reduce Fatty Foods
- Eat early in the evening

3. Lifestyle Modifications:

- Avoid Coffees and hot beverages
- Raise the head during sleep
- Exercise regularly







CASE 5

**A 30 YEARS OLD MAN WITH NAUSEA &
VOMITING**



HISTORY

Detailed history of Nausea and Vomiting.

Apply the ODIPARA (Onset, Duration, Intensity, Progression, Aggravating Factor, Relieving Factors & Anything Else???) Mnemonic.

For any fluid that comes out of the body ask the following questions: Color, Stained, Blood and amount.

PHYSICAL EXAM

1. General examination: Look for signs of dehydration such as dry mucus membranes.

- Eating, Nocturnal Symptoms (reflux), bending/stooping (reflux) and exertion (cardiac).
- loss. Does she look malnourished?

2. Abdominal examination: Look for visible peristalsis. Can you elicit a gastric succussion splash of obstruction?

- Abdominal Mass.

- Abdominal tenderness in any of the Abdominal Quadrants.
- Auscultation for a ‘succussion splash’ suggestive of outlet obstruction.

INVESTIGATIONS

1. Blood Tests:

- Complete Blood Count
- Liver Function Tests
- C Reactive Protein

2. Radiological Investigations:

- Abdominal Ultrasound
- Upper endoscopy

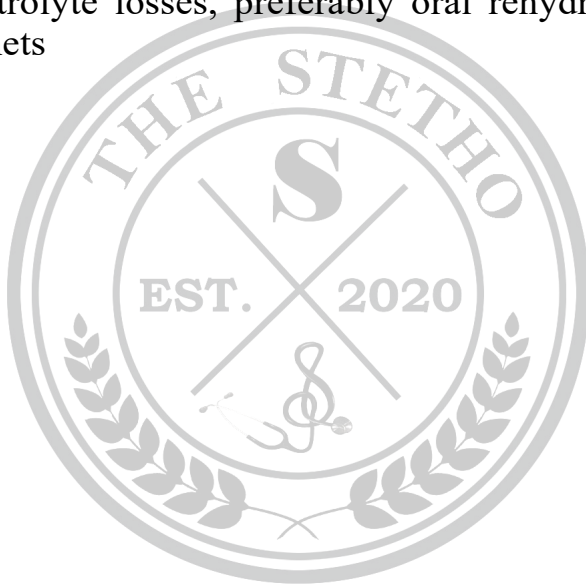
MANAGEMENT

1. Specific Rx:

- Give an antacid medication for symptomatic reflux and dyspepsia.
- A trial of omeprazole 20–40 mg daily, with Gaviscon as needed.

- This should be started after the endoscopy (or discontinued for 1 week prior to endoscopy to get a representative H. pylori test)

2. Supportive Rx: To replace fluid and electrolyte losses, preferably oral rehydration sachets







CASE 6

A 30 YEARS OLD LADY WITH FAINTING EPISODES



HISTORY

1. Fainting: Apply the ODIPARA (Onset, Duration, Intensity, Progression, Aggravating Factor, Relieving Factors &Anything Else???) Mnemonic.

2. Frequency of spells

- Most blackouts, particularly in this young group, are very infrequent. Knowing how often they happen

3. Is there any warning?

- Epileptic seizures may be preceded by an aura. Events with no warning are more likely to result in injury.

4. Are there any particular triggers or situations that precede the blackouts?

- Syncope during exercise is worrying as it may represent a mechanical outflow obstruction to the left ventricle or an exercise - induced arrhythmia. Syncope following pain or unpleasant stimuli may

be neurally mediated faints. Orthostatic hypotension manifests after standing upright. Syncope after head rotation or neck pressure may be due to carotid sinus hypersensitivity.

5. Was there a prompt or gradual recovery?

- Short - lived arrhythmias usually result in prompt recovery whereas epileptic seizures or hypoglycaemic faints may be followed by periods with reduced conscious levels

6. Were there any additional symptoms?

- Rapid palpitations may indicate an arrhythmia. Nausea and sweating may be associated with neurally mediated faints or hypoglycaemia.

7. Is there an eye - witness account?

- Was there seizure - like tonic – clonic movements consistent with epilepsy? Was the patient very pale and cold consistent with low cardiac output?

8. Is the patient on any drugs?

- Drugs such as diuretics and antihypertensives may lead to excessive blood - pressure reduction. Hypoglycaemic medications may lower blood sugar too much. Antiarrhythmic drugs may cause bradycardia. Recreation drug use may also cause arrhythmias or hypotension.

PHYSICAL EXAM

Start with the General Physical Exam

Followed by a full Cardiovascular Examination with particular focus on the Heart sounds:

- second heart sound – soft in aortic stenosis (AS).
- third heart sound – present in MR due to increased ventricular filling in early diastole.
- fourth heart sound – in AS due to atrial filling of a hypertrophied non - compliant left ventricle.

General inspection – for features of endocarditis.

Pulse, e.g., slow rising in AS, equality of pulses and strength of femoral pulses in aortic coarctation.

Blood pressure, e.g., reduced pulse pressure in AS, or hypertension with coarctation of the aorta.

JVP – large ‘V’ waves associated with tricuspid regurgitation (TR).

Apex beat – displaced or hypertrophied.

Hepatomegaly – pulsatile in TR.

INVESTIGATIONS

1. Blood Tests: The following standard investigations would be helpful:

- Full Blood Count (FBC).
- Electrolytes.
- Blood Glucose.
- Renal Function.
- Thyroid Function.
- Troponin/Creatinine kinase.

- Fasting Lipid Profile and Glucose.

2. Radiological Investigations:

- Chest X-ray
- Echocardiogram
- ECG

DIFFERENTIALS

Neurally mediated syncope.

Psychogenic syncope.

An arrhythmia.

Epilepsy.

MANAGEMENT

1. Lifestyle changes:

- The most important action is to keep well hydrated at all times. This means drinking a lot more fluids than most people are used to, i.e., 500 ml every 4 hours, starting on waking and carrying on through during the day (even more on hot days). Avoid

potential diuretics such as caffeine and alcohol. Urine should be clear and the patient should never feel thirsty. Increase salt intake. Exercise to improve venous return through leg muscle action. Sometimes lower limb compression stockings to reduce venous pooling are advised. Avoid stimuli that provoke attacks and if a prodrome starts take immediate action by lying flat.

2. Medications:

- The most effective is the vasoconstrictor midodrine (an alpha agonist).
- Beta blockers are commonly prescribed (to suppress the sympathetic arm of the reflex) but are usually ineffective.
- Other drugs are fludrocortisone (a mineralocorticoid that retains salt and raises blood pressure)

CASE 7

A 30 YEARS OLD WOMAN WITH CHRONIC DIARRHEA

Scenario: A 30 Years old has had an increased frequency of bowel opening, up to five times a day, abdominal pain and general malaise for the last 6 months. The symptoms are aggravating and she seems concerned. She is now at your clinic for further evaluation



HISTORY

1. Diarrhea: Apply the ODIPARA (Onset, Duration, Intensity, Progression, Aggravating Factor, Relieving Factors &Anything Else???) Mnemonic.

- For any fluid that comes out of the body ask the following questions: Color, Stained, Blood and amount.

PHYSICAL EXAM

1. General examination: Look for signs of dehydration such as dry mucus membranes.

- Eating, Nocturnal Symptoms (reflux), bending/stooping (reflux) and exertion (cardiac).
- loss. Does she look malnourished?
- Check for anemia.
- Check for weight change.
- Feel for lymphadenopathy, especially supraclavicular lymph nodes of gastric carcinoma (Virchow's node).

2. Abdominal examination:

- Feel for palpable masses such as an inflamed terminal ileum and caecum in Crohn's disease, or a thickened loop of distal colon in ulcerative colitis.
- Feel for organomegaly
- Anorectal examination
- Digital rectal examination and proctoscopy can reveal anal fissures, hemorrhoids and anal or distal rectal cancer.

INVESTIGATIONS

1. Stool chart: document the frequency and consistency of the stool, and the presence of blood in the stool.

- Macroscopic examination: determine if there is blood or mucus in the stool.
-
- Microscopic examination: look for traces of blood and excessive numbers of inflammatory (white blood) cells.

- Stool culture: to detect bacterial pathogens such as Salmonella.

2. Standard blood tests:

- Complete Blood Count
- Liver Function Tests
- C Reactive Protein
- serology

3. Specialized blood tests:

- Anti-S. cerevisiae antibody (ASCA)
- Antibodies to gliadin peptides (anti endomysial antibody)
- Anti-tissue transglutaminase (anti-tTG antibody)

4. Radiological Investigations:

- Abdominal Ultrasound
- Upper endoscopy with Biopsy
- Colonoscopy with biopsy
- Histology
- Plain abdominal radiographs
- Barium Meal and follow-through

- CT and magnetic resonance imaging (MRI) scanning

MANAGEMENT

The modern day IBD treatment is targeted at concealing safe reaction towards so far unknown antigens, and customary treatment that includes 5-aminosalicylic acid (5-ASA), thiopurines, corticosteroids and methotrexate. Although a complete cure for IBD is not yet available but ongoing revelations in the field of neurosciences and immunology have uncovered that signals in the fringe sensory system direct irritation, including levels of $\text{TNF-}\alpha$ show promising results. Clinical examinations utilizing vagus nerve embedded triggers for IBD treatment show empowering results. As needs be, the reflex control (neural) of aggravation is developing as a possible remedial objective in treating IBD. Here, we audit available and current treatment choices. These include the use 5-ASA, Glucocorticosteroids, Methotrexate and Thiopurines

- Stop smoking
- 5-Aminosalicylates

- Corticosteroids
- Thiopurines
- Biological agents
- Surgery







CASE 8

**A 26 YEARS OLD LADY WITH
PALPITATIONS**



HISTORY

1. Palpitations: Apply the ODIPARA (Onset, Duration, Intensity, Progression, Aggravating Factor, Relieving Factors &Anything Else???) Mnemonic.

2. Frequency?

3. What is the nature of the chest sensation? Is it a pain or discomfort (if so, what are its characteristics), or an awareness of her heart beat?

4. Where in the chest is it and does it spread/radiate?

5. Are the palpitations fast or slow, sustained or intermittent, regular or chaotic?

6. Do they have a gradual or sudden onset and offset?

7. Is the patient on any drugs?

8. Check stressors or emotional disturbances in at home or work

PHYSICAL EXAM

Start with the General Physical Exam

Followed by a full Cardiovascular Examination with particular focus on the Heart sounds:

- second heart sound – soft in aortic stenosis (AS).
- third heart sound – present in MR due to increased ventricular filling in early diastole.
- fourth heart sound – in AS due to atrial filling of a hypertrophied non - compliant left ventricle.

General inspection – for features of endocarditis.

Pulse, e.g., slow rising in AS, equality of pulses and strength of femoral pulses in aortic coarctation.

JVP – large ‘V’ waves associated with tricuspid regurgitation (TR).

Apex beat – displaced or hypertrophied.

INVESTIGATIONS

1. Blood Tests: The following standard investigations would be helpful:

- Full Blood Count (FBC).
- Electrolytes. (Potassium-K)

2. Radiological Investigations:

- Echocardiogram
- ECG
- 24-48 Hrs Holter Monitor
- Implantable Loop Recorder
- Electrophysiological Study
- Exercise Testing

DIFFERENTIALS

Ventricular Tachycardia

Atrial Fibrillation

Supraventricular Tachycardia

Atrial/Ventricular Ectopic beats

Intermittent Heart Block/Bradycardia

MANAGEMENT

In a structurally normal heart, reassurance is often all that is required and symptoms settle spontaneously. Rarely, beta blockers can be tried. In extreme examples (a very high burden and severe symptoms), radiofrequency ablation of the ectopic focus can be performed.

