

INTRODUCTION

Chest pain is one of the most common symptoms of acute coronary syndrome (ACS).

It is also a common feature in many other non-cardiac conditions such as chest infection with pleuritic pain, pulmonary embolus, reflux oesophagitis, indigestion, and simple musculoskeletal chest pain.

There must be a high index of suspicion that any chest pain is cardiac in origin.

HISTORY

Taking and assessing a history

There are a number of specific factors that may help in reaching a reasoned working diagnosis, and applying appropriate management measures to the patient. ACS cannot be excluded on clinical examination (**refer to ACS guideline**).

Is there a previous history of coronary heart disease?

Nature and location of the pain

Ask about:

- time of onset
- duration
- characteristics (type of pain including radiation)
- aggravating and alleviating factors.

Myocardial infarction and angina pain:

- tends to be central in the chest and constricting in nature.

It may, however, present in:

- the shoulders
- upper abdomen
- referred to the neck, jaws and arms.

Anginal pain:

- tends to last minutes in duration, but should it persist for more than 15-20 minutes, or despite usual treatment, myocardial infarction is more likely.

Associated signs and symptoms

The following associated signs and symptoms are as important as the pain itself and are all strongly indicative of cardiac origin:

- nausea
- vomiting
- sweating
- radiation of pain to the arm(s).

If breathlessness is a predominant symptom/sign with tightness in the chest then causes of breathlessness must be considered.

Pleuritic pain is associated with chest infection and pneumonia producing a stabbing, generally one-sided pain that is **worse on breathing in**. Patients with pleuritic chest pain, associated with infection, usually have a cough with sputum, and may well have a raised temperature (>37.5°C).

Most pain associated with indigestion is central, related to food and may be associated with belching and burning in nature. However, some patients with myocardial infarction may also get indigestion type pain and belching.

Muscular pain tends to be sharp/stabbing, is worse on movement and often associated with tenderness.

ASSESSMENT

Assess: **ABCD's**

Specifically look at the patient's general appearance, typical presentations include:

- **Myocardial Infarction (MI)** – pale with cold sweaty extremities
- **chest infection** – good colour with warm sweaty extremities
- **musculoskeletal** – normal appearance.

Assess for accompanying features:

- sweating
- pallor
- breathlessness (including respiratory rate)
- cough.

Evaluate if any TIME CRITICAL features are present, these may include:

- all cardiac related chest pain is time critical
- respiratory rate <10 or >30 breaths per minute
- oxygen saturation (SpO₂) <95% in air
- any major ABCD problems.

Non-Traumatic Chest Pain/Discomfort

If any of these features are present, **CORRECT A AND B PROBLEMS ON SCENE THEN COMMENCE TRANSPORT** to nearest suitable receiving Hospital.

Provide a **Hospital Alert Message / Information call**. This should be routine practice for **ANY** potentially cardiac related chest pain.

En-Route continue patient **MANAGEMENT** (see *below*).

MANAGEMENT

Management of chest pain (for cardiac chest pain refer to *ACS guideline*)

Follow the medical emergencies guideline:

Start correcting:

- **AIRWAY**
- **BREATHING**
- **CIRCULATION**
- **DISABILITY** (mini neurological examination)
- specifically record respiratory rate and blood pressure
- 12-lead ECG for all chest pains (NOTE: may be normal initially in MI)
- monitor with ECG for arrhythmias
- undertake pulse oximetry
- administer high concentration oxygen (O₂) (*refer to oxygen guideline for administration and information*) via a non-re-breathing mask, using the stoma in laryngectomee and other neck breathing patients. High concentration O₂ should be administered routinely, whatever the oxygen saturation, except in patients with chronic obstructive pulmonary disease (COPD) (*refer to COPD guideline*)
- record pain score and consider analgesia (*refer to pain management guidelines*).

Key Points – Non-Traumatic Chest Pain / Discomfort

- Think cardiac first.
- Assess nature of pain and associated symptoms.
- Assess patient's general appearance.
- 12-lead ECG for all chest pains.
- ECG monitor for all chest pains.

REFERENCES

Refer to individual guidelines.

METHODOLOGY

Refer to methodology section.