Medicine for Managers

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Doctor, I've Got Chest Pain

Every GP regularly sees patients with chest pain and each time it is important to distinguish the important from the less serious causes of the pain. It is easy to criticise the doctor when the diagnosis made is incorrect and in theory pains of different origin should be easy to distinguish. Unfortunately, however, they are often not distinct resulting in misdiagnosis or delay in treatment.

OK, so what are the causes of chest pain. There are four principal physical causes of the pain related to the structures in the chest:

1. **Pain related to the heart**
2. **Pain related to the lungs**
3. **Pain related to the upper gastro-intestinal tract**
4. **Pain related to the chest wall**

There are some other important causes but they are relatively unusual. Such causes of pain include:

- Gall bladder pain (cholecystitis) which may be reflected upwards into the chest
- Gastric ulcer which again may radiate upwards to the chest
- Pericarditis which is an inflammation of the covering of the heart
- Pulmonary embolism, which is a blockage in the arteries carrying blood from the heart to the lungs
- Herpes zoster (shingles)
- Mastitis (pain and swelling in the breast associated with infection

To read the medical textbooks would lead you to believe tha it would be reasonable to assume that it is very easy to separate heart pain from lung pain, from gut pain from chest wall pain. Angina, caused by a restriction in blood flow to the heart, usually caused by narrowed arteries, results in pain which ***is brought on by exercise and relieved by rest***.

The chest pain of a heart attack is quite different, described as ***crushing and like a tight band round the chest, radiating down the arms and up into the neck, associated with nausea, vomiting and sweating***.

Pain caused by lung disease such as bronchitis or pneumonia is usually little more than discomfort and the predominant symptom is breathlessness and general illness. However, if the patient develops pleurisy, which is

inflammation of the pleura (the covering of the lungs) which sticks to the inside of the chest wall, breathing in ***(inspiration) is associated with a very severe stabbing pain and coughing is agonising.***

Reflux, associated with hiatus hernia, produces a ***burning lower central chest pain***, often associated with food and with an unpleasant taste in the mouth and flatulence, often aggravated by bending and relieved by antacids.

Pain associated with the muscles and bones of the chest wall often follows a strain or an injury and is associated with ***tenderness, pain on movement, aggravated by lying, coughing or sneezing***.

So there you are; anyone can identify the cause of chest pain, induced by exercise, crushing, stabbing, heartburn, tenderness or movement. Yet in reality it can be extremely difficult to distinguish these four types of pain apart. The problem so often is that the patient does not present with the **classic** symptoms.

Even if it is a heart attack sometimes the pain is only moderate, not clearly defined, and maybe not radiating down the arms.

Sometimes lung infections cause severe persistent pain rather than the classic pleuritic stab.

Sometimes chest wall pain does not present classically and is easily mistaken for something else.

Shingles can confuse by causing quite severe pain for several days before the classic strip of vesicular rash appears.

Impressive medical diagnosis on the television does happen in the surgery sometimes but very often the symptoms a a vague hotchpotch which do not clearly point to any one diagnosis.

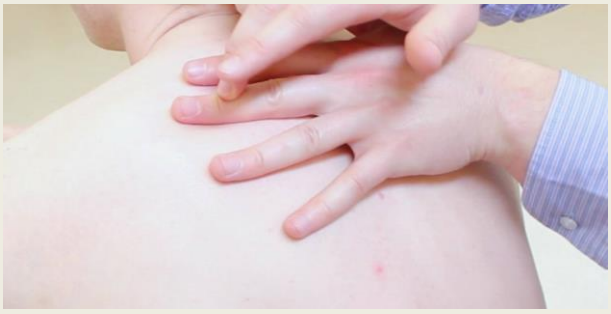
Examination is vital. The time honoured techniques of history, inspection, palpation, percussion and auscultation will make most of the diagnoses. The tragedy is that there is less emphasis on examination these days and more on testing. But examining is so important.

The history: If you are lucky, careful questioning will put you on the right track and even in urgent situations, a diagnosis can often be made in under two minutes. How long have you had the pain, where is it, what makes it worse, what makes it better, does it spread anywhere, can you get comfortable? What other symptoms are there; sweating, nausea, indigestion, headache, temperature, shivering? Have you had anything like it before? What medicines are you taking? Then the more general questions as necessary.

Inspection: A very underrated part of an examination, what you can see can tell you a lot about a patient. Colour of skin or lips, breathlessness at rest, anxiety and distress, movements, the shape and movement of the chest itself, facial grimaces associated with coughing or deep breathing, evidence of flatulence all give clues to possible cause.

Palpation: By examining the chest with the fingers, any tender areas may be identified and any structural abnormalities of the chest.

Percussion: This is the technique by which any changes in density in any part of the chest may be identified. The technique involves laying one or two fingers on the chest and striking quickly with the tip of a finger of the other hand



The technique is used to detect any changes in resonance in any part of the chest. Fluid or infection in the lung, for example,will result in a dull thud to percussion whereas in a healthy lung and chest a 'hollow' sound will be noted.

Auscultation: The use of the stethoscope may be used to identify, particularly, evidence of lung infection where the normal sound, suggestive of a healthy lung and like wind rustling through a tree, is replaced by one of several 'moist' sounds or a lack of sounds altogether if a lung has deflated. Heart sounds may be an important clue to the function and any problems with heart activity.

Even after all the physical examinations above, the diagnosis may not be definite. In such circumstances the patient is transported to hospital where radiography and blood tests, ultrasound, ECG (Heart recording), CT scan or MRI scan will all help with the diagnosis.

So unfortunately, the enormous skill of the 'Holby City' Accident and Emergency Team who glance at a patient and wave a stethoscope at the chest to make an impressive diagnosis are generally just what they purport to be – fiction. Some cases are very obvious, some are very difficult and elude diagnosis, and all grades in between. But I can say with great confidence, doctors are a lot better at it than they used to be!

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