First printed in Medical Forum WA Magazine, May 2019 Edition.

How to triage patients with chest pain?

By Dr Michael Muhlmann, Interventional Cardiologist, Nedlands

Chest pain assessment in general practice is challenging and common (1-3%); most GPs see 1-2 patients each week. While the differential diagnosis is broad, acute life-threatening disease is uncommon; severe diseases such as acute coronary syndromes, pulmonary emboli and acute aortic dissection are greatly outnumbered by musculoskeletal chest pains and gastroesophageal reflux. Thus, clinical judgement and triage remains paramount.

The incidence of chest pain in general practice is not decreasing. However, the percentage makeup of acute coronary syndromes is. Moreover, atypical complaints lead to more uncertainty.

Acute coronary syndrome (ACS) is life-threatening and needs to be considered in all patients with chest pain. A history and examination will define high risk patients and an ECG is a key immediate investigation.

Guidelines say GPs should refer all patients with suspected ACSs to tertiary centres as soon as possible. Of course, if every case of chest pain was referred, tertiary facilities would be overloaded. The GP's gatekeeper role means that only a minority are referred. Besides clinical findings, GPs use gut feeling and the clinical backgrounds of their patients to make referral decisions. Patients are referred for safe exclusion of ACS and about 1 in 5 are found to have severe disease.

Chest pain history, clinical examination, determination of cardiac risk factors and initial ECG all provide immediate cardiac information to GPs.

There is conflicting data about chest pain history. Certain characteristics increase the likelihood of ACS - chest pain radiating to shoulders or one or both arms and pain precipitated by exertion.

Conversely, pains on palpation, pains described as stabbing or positional reduce the likelihood of ACS. Those with previous cardiac disease are clearly at risk of a further event.

All patients with chest pains receive an ECG at outset. However, this is not always practical and there are concerns about the diagnostic accuracy for the detection of abnormalities by doctors (measured at up to 70% for GPs). Please note, when ECG machines interpret tracings treat with extreme caution, particularly when diagnosing key findings.

For a suspected ACS, community troponin testing should not delay ED referral. It is reasonable for a GP to order a 'retrospective' troponin in a patient who is low risk and asymptomatic and in whom symptoms have completely resolved 24 hours prior. Mark any acute troponin as 'urgent' and ensure the patient is contactable but generally, troponin has little role in the primary setting and suspected ACS needs to be transported to the nearest ED.

Patients with ST elevation or ongoing chest pains should be transferred via ambulance. In all other scenario's patients should be advised not to drive themselves. All patients should be given aspirin and GTN +/- opioids for pain. Oxygen is no longer recommended for routine use unless saturations show <93%. ●

ED. **More emphasis will be placed on accurate triaging of chest pain, as the population ages. These notes will help.**