



Kam Cheong Wong

Just a sore throat?

Keywords: diagnosis, differential; electrocardiography; case reports; heart diseases

Case study

A man, 43 years of age, presents to his general practitioner with a 6 day history of sore throat. There are no other symptoms of an upper respiratory tract infection. In passing, the patient mentions that 6 days ago he experienced an episode of exertional chest pain. On further questioning it is found the chest pain was central with no radiation, it lasted 30 minutes, resolved spontaneously and was associated with nausea. He did not seek medical assessment at the time and has no cardiac history. He takes no regular medication and has no allergies. He is an exsmoker with a 15 pack-year history (he quit 7 years ago) but has no other known cardiac risk factors. He does not drink alcohol or take illicit drugs. On examination, he appears well built with a body mass index of 27. He is not in

distress apart from a moderate sore throat. He is afebrile. His heart rate is 66 bpm, regular and his blood pressure is 122/80 mmHg. His tonsils and uvula are neither inflamed nor swollen. He has no cervical lymphadenopathy. His lungs are clear on auscultation and his heart sounds are dual with no murmur. His electrocardiogram is shown in *Figure 1*.

Question 1

Describe any clinically important findings shown in the electrocardiogram (ECG) in *Figure 1*.

Question 2

What is the likely pathology in this case?

Question 3

How many patients with this problem present atypically?

Question 4

What are some of the atypical presentations of this problem?

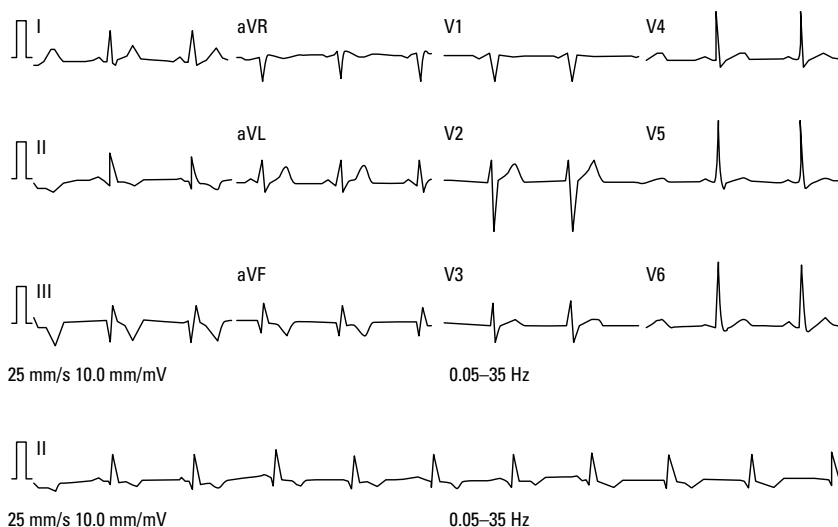


Figure 1. ECG of patient presenting with sore throat and history of chest pain

Answer 1

The ECG shows inferior T-wave inversions and inferior Q-waves.

Answer 2

These ECG findings suggest a previous myocardial infarction. This patient's subsequent coronary angiogram reveals multivessel disease including a 100% occluded proximal right coronary artery with collateralisation from the left side. An echocardiogram shows a segmental left ventricular dysfunction with inferior/inferoseptal hypokinesia consistent with a recent myocardial infarction. This patient most likely has a chronic subtotal right coronary lesion that became acutely occluded 6 days before his presentation, producing the episode of chest pain. It is unclear whether the myocardial infarction caused the patient's sore throat.

Answer 3

It has been estimated that 10–30% of patients with myocardial infarction have an atypical presentation.¹ Although this particular case is very uncommon, it serves as a good reminder that atypical presentations can occur. Importantly, in this case the examination findings did not fit with an upper respiratory tract infection or other local cause of sore throat.

Answer 4

The atypical presentations of myocardial infarction can include epigastric pain, nausea,

sore throat^{2–4} and toothache.^{5,6} Myocardial ischaemia should be considered and excluded in patients who present with any of these symptoms, particularly patients with multiple cardiovascular risk factors or presentations where no pathology is found that explains the patient's symptoms. Typical and atypical presentations of myocardial infarction are listed in *Table 1*.

Summary

- Most patients with sore throat have an upper respiratory tract infection or another local explanation for their pain. These patients do not need ECGs or other cardiac investigations.
- Atypical presentations of myocardial infarction are relatively common, accounting for 10–30% of cases.
- Patients with vague cardiac symptoms or atypical symptoms of a myocardial infarction may be more likely to present to their general practitioner than to a hospital emergency department.
- Patients with atypical presentations of myocardial infarction are likely to be unaware of the potential significance of their symptoms, therefore GPs need a high index of suspicion.

Author

Kam Cheong Wong MBBS, BE, MSc, FRACGP, is a general practitioner, medical educator, Beyond Medical Education, Clinical Senior Lecturer, University of Sydney and Conjoint Lecturer,

University of Western Sydney, New South Wales. kam.wong@sydney.edu.au.

Conflict of interest: none declared.

References

1. Cemeran P, Jelinek G, Kelly A-M, et al, editors. Textbook of adult emergency medicine. 2nd edn. Edinburgh: Churchill Livingstone, 2004.
2. Auer J, Weber T, Berent R, et al. Throat pain as the only symptom of inferior wall myocardial infarction. *J Otolaryngol* 2006;35:424–6.
3. Abinader EG, Sharif DS, Omary M. Inferior wall myocardial infarction preceded by acute exudative pharyngitis in young males. *Isr J Med Sci* 1993;29:764–9.
4. Iwata I, Dohke K. The symptom of sore throat in myocardial infarct. *Jibiinkoka* 1961;33:645–6.
5. Okeson JP. Non-odontogenic toothache. *Northwest Dentistry* 2000;79:37–44.
6. Kreiner M, Okeson JP. Toothache of cardiac origin. *Journal of Orofacial Pain* 1999;13:201–7.

Table 1. Typical and atypical presentations of myocardial infarction

Typical presentations	Atypical presentations
<ul style="list-style-type: none"> • Central chest pain • Chest tightness • Chest heaviness • Chest squeezing • Chest pressure • Chest pain – may radiate to the jaw, neck, both arms (especially ulnar surface of forearm and hand), back, and epigastrium* • Dyspnoea† • Nausea with or without vomiting • Diaphoresis 	<ul style="list-style-type: none"> • Abdominal or epigastric pain • Lightheadedness with or without syncope† • Fatigue and/or weakness with or without syncope† • Sore throat • Toothache

* Rarely below umbilicus or above the mandible

† Dyspnoea, fatigue, and faintness are more common in elderly and diabetic patients

correspondence afp@racgp.org.au