Case 6: transient ST elevation

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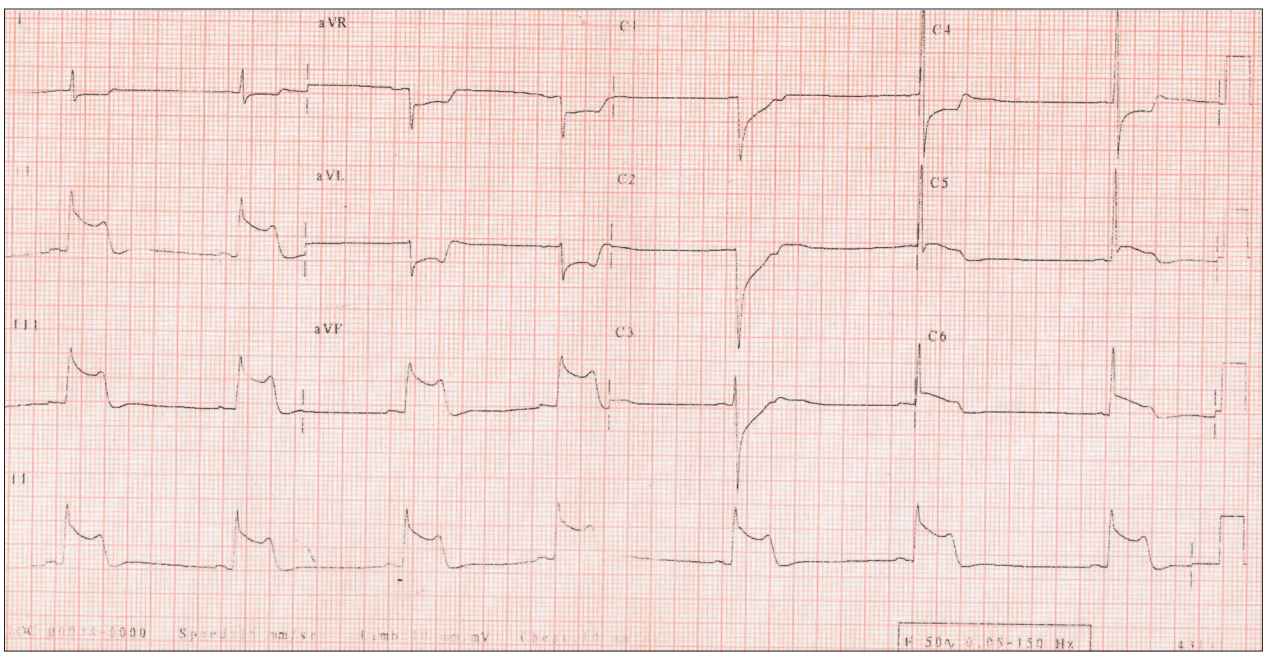
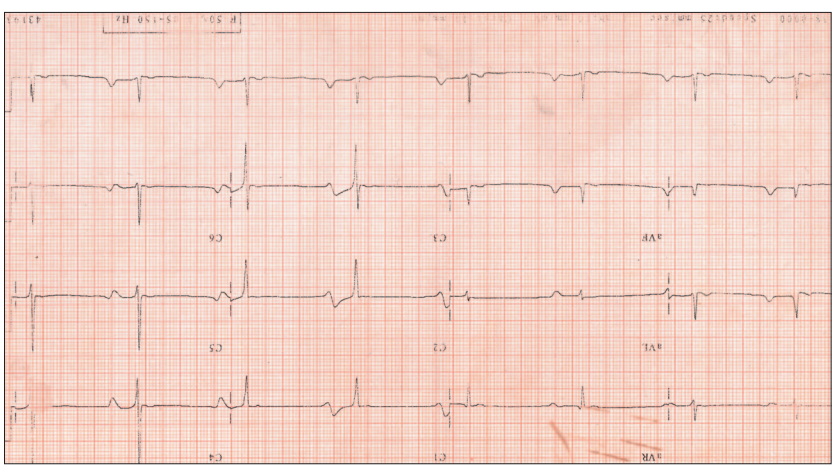


Figure 1. The electrocardiogram during chest pain.

CASE 6

A 50-year-old man presented with a 1-week history of episodes of ischaemic-type chest pain always occurring at rest and each lasting for several minutes. A further episode occurred following hospital admission during which an electrocardiogram (ECG) was recorded (*Figure 1*). The pain resolved rapidly with sublingual glyceryl trinitrate and a further ECG (*Figure 2*) was recorded 5 minutes after the first ECG. What is the likely diagnosis?

Figure 2. The electrocardiogram 5 minutes later following sublingual glyceryl trinitrate.



DISCUSSION

Figure 1 shows marked ST segment elevation in the inferolateral leads with ST segment depression in every other lead. The ST changes have almost completely resolved in *Figure 2* without the development of pathological Q waves. Widespread T wave abnormalities persist. The likely diagnosis is Prinzmetal's angina. This condition occurs as a result of coronary artery spasm resulting in localized acute transmural ischaemia, and may occur in angiographically normal or diseased coronary arteries. When associated with coronary artery disease, spasm usually occurs adjacent to the atheromatous plaque.

In the absence of significant obstructive coronary artery disease the mainstay of treatment for Prinzmetal's angina is vasodilators — nitrates and calcium channel blockers. Beta-blockers are avoided as β_2 adrenoceptors mediate coronary vasodilatation. Blockade of these receptors may promote unopposed α-adrenoceptor-mediated coronary vasoconstriction. HM

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