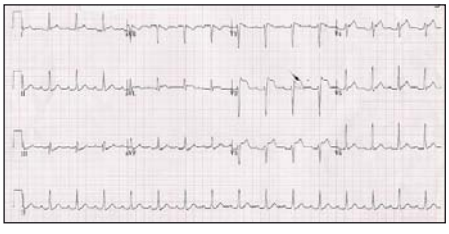
Varicella pericarditis mimicking myocardial infarction

Introduction

Primary varicella (chicken pox) is characterized by disseminated, pruritic vesicles. It is very common with 90% of children under the age of 10 years having been affected (McCrary et al, 1999). The typical established eruption is easy to diagnose but in the very early stages of evolution the cutaneous findings may be non-specific. The disease course is usually benign and self-limiting. However, complications can occur in otherwise healthy children and more commonly in adults and immunocompromised patients.

This article describes the case of a previously healthy man, who demonstrated an unusual example of primary varicella presenting with a cardiac complication.

Figure 1. Electrocardiogram showing changes thought to be consistent with acute myocardial infarction.



Discussion

Pericarditis is a rare complication of primary varicella infection (Seddon, 1986; Abrams et al, 2001). The differential diagnosis includes other recognized systemic manifestations of primary varicella causing acute chest or abdominal pain including myocarditis, endocarditis, cardiomyopathy, cardiac tamponade, pneumonitis, gastritis, splenic infarction, hepatitis, pancreatitis, intestinal bleeding and intestinal necrosis. Primary disseminated varicella can present as an acute abdomen (Kim and Haycox, 1999). Multi-organ disease can be life threatening and is commoner in immunocompromised individuals.

Ma et al (2007) recently reported a case of reactivated varicella zoster (shingles) associated with pleuropericarditis, who presented with an apparent inferolateral myocardial infarction. This patient did not undergo thrombolysis, as emergency cardiac catheterization excluded critical occlusive coronary disease. To the authors' knowledge, this is the first reported case of primary varicella pericarditis mimicking acute anterior myocardial infarction and resulting in unnecessary thrombolysis. Many patients admitted with acute chest pain do not turn out to have had a myocardial infarction (Fruergaard et al, 1996). This case serves as a reminder of the association between varicella and systemic multi-organ disease. This possibility should be considered in any patient with an erythematous or vesicular rash and atypical chest pain. BJHM

Abrams D, Derrick G, Penny DJ, Shinebourne EA, Redington AN (2001) Cardiac complications in children following infection with varicella zoster virus. *Cardiol Young* **11:** 647–52

Fruergaard P, Launbjerg J, Hesse B et al (1996) The diagnoses of patients admitted with acute chest pain but without myocardial infarction. *Eur Heart J* **17:** 1028–34

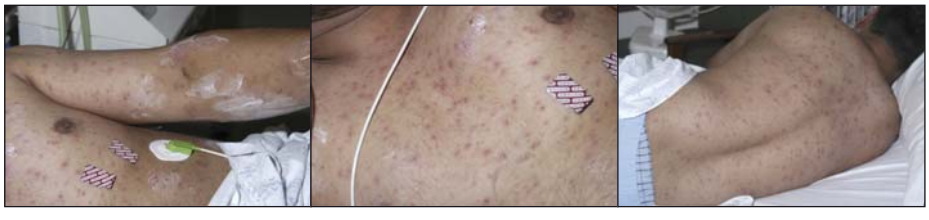
Kim S, Haycox C (1999) Primary disseminated varicella presenting as an acute abdomen. *Pediatr Dermatol* **16:** 208–10

Ma TS, Collins TC, Habib G, Bredikis A, Carabello BA (2007) Herpes zoster and its cardiovascular complications in the elderly – another look at a dormant virus. *Cardiol* **107:** 63–7

McCrary M, Severson J, Tyring S (1999) Varicella zoster virus. *J Am Acad Dermatol* **41:** 1–14

Seddon DJ (1986) Pericarditis with pericardial effusion complicating chickenpox. *Postgrad Med J* **62:** 1133–4

Figure 2. Widespread vesicular eruption, apparent the day after admission.

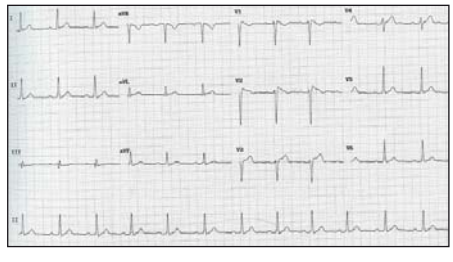


Case Report

A 29-year-old man, with no past medical history of note, was admitted with a 2-day history of intermittent, sharp lower chest and epigastric pain, worse on movement, with some radiation to the back. Ibuprofen had eased the discomfort slightly. He reported a 2-week prodrome of 'flu-like symptoms and arthralgia. On examination, he was distressed, agitated and sweating. He was febrile at 38.0°C, but cardiovascularly stable. Mild epigastric tenderness was found, with no peritonism. A macular erythematous eruption was noted on the trunk but not thought significant. An electrocardiogram (ECG) showed changes thought to be consistent with an acute anterior myocardial infarction (*Figure 1*) and so the patient underwent thrombolysis with intravenous reteplase. Neither his pain nor the ECG changes altered. The following day, the rash became more widespread and vesicular in nature, affecting face, neck, trunk and arms (*Figure 2*). Serial ECGs remained unchanged and cardiac enzymes (creatine kinase and troponin T) were not elevated. The diagnosis of primary varicella was confirmed with positive immunofluorescence of blister fluid to varicella zoster virus. Microscopy of a Tzanck smear showed typical multinucleated giant cells.

The cardiac diagnosis was revised to acute varicella pericarditis. Treatment with oral aciclovir, paracetamol and ibuprofen was given and the symptoms settled quickly. The ECG abnormalities had resolved 3 months later (*Figure 3*).

Figure 3. Electrocardiogram 3 months later, showing resolution of the acute changes.



Dr Stuart N Cohen *is Specialist Registrar in Dermatology, Nottingham University Hospitals NHS Trust, Queen's Medical Centre, Nottingham NG7 2UH,*
Dr Andrew G Affleck *is Clinical Fellow in Cutaneous Surgery, Department of Dermatology, Ninewells Hospital, Dundee and* **Dr Sheelagh M Littlewood** *is Consultant Dermatologist, Nottingham University Hospitals NHS Trust, Queen's Medical Centre, Nottingham*

Correspondence to: Dr SN Cohen