Anaphylactoid reaction to hydroxocobalamin with tolerance of cyanocobalamin

Sir,

A patient with an anaphylactoid reaction to hydroxocobalamin but good tolerance of cyanocobalamin is described, which emphasizes the usefulness of challenge tests in cases of allergic or pseudoallergic reactions.

A 33-year-old woman with a history of Crohn’s disease developed subacute combined degeneration of the spinal cord due to vitamin B12 deficiency. Replacement therapy with hydroxocobalamin was established at a dose of 10 mg intramuscularly every month with no problems for more than a year. Unexpectedly, 2 hours after a dose, the patient developed generalised urticaria and angioedema with involvement of the upper airway. Prick and intradermal tests performed with 5 mg/ml and 100 μg/ml of hydroxocobalamin, respectively, were negative. Under in-hospital observation the patient was given 2500 μg of hydroxocobalamin by the intramuscular route; 20 min later, she experienced pruritus on her palms, shortly followed by generalised urticaria, prominent lip and palpebral oedema, hoarseness and chest tightness. The patient was treated with epinephrine, methylprednisolone and chlorpheniramine with total recovery in 2 hours. A challenge test with benzyl alcohol, added as preservative, was carried out with no reaction. On the basis that the neurologic manifestations would progress without adequate replacement therapy, a desensitization protocol was developed. Increasing doses of hydroxocobalamin, beginning with 0.05 μg, were administered every 15 min by the intramuscular route. Ten minutes after the injection of 125 μg of hydroxocobalamin, the same allergic reaction appeared. Premedication with antihistamines did not provide reliable effective protection from the hydroxocobalamin-induced reaction in the patient. However, intramuscular challenge tests with cyanocobalamin up to 10 mg, performed on three different occasions, were followed by no reaction. In fact, the patient receives 10 mg of cyanocobalamin monthly without problems.

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1 Upwu CN, Gibbins FJ. Anaphylactoid reaction to vitamin B12 appearing after several years of treatment. Lancet 1976;i:1224-5.

Salvage angioplasty following failed thrombolysis

Sir,

Dr S Mahy and Jennings are correct to point out the dilemmas facing physicians responsible for the further management of patients with acute myocardial infarction and apparent failure to respond to thrombolytic therapy.1 The lack of evidence supporting any particular management strategy is surprising given that up to 50% of patients fail to respond to thrombolytic therapy in the first few hours and that persistent ST segment elevation following acute myocardial infarction (AMI) is clearly associated with poor outcome. Purcell et al2 demonstrated a mortality of 18.2% in unselected patients with AMI and <50% resolution of ST segment elevation in the worst lead 60 minutes after the initiation of thrombolytic therapy. A substudy3 of the INJECT trial revealed a mortality of 17.5% in patients with <30% resolution of the summed ST segment elevation in leads reflecting the infarct zone. Even though it is frequently stated that such electrocardiographic (ECG) features are not 100% sensitive or specific for persistent arte- rial occlusion, the presence of such features must alert us to a patient who is at high risk of further adverse events. Salvage angioplasty has only been examined in prospective randomised studies against conservative therapy.3 Despite a statistically significant reduction in the incidence of death or severe heart failure, this strategy has not been widely adopted. nor examined in patients receiving angioplasty era. This is surprising, given that this study probably underestimated the benefit of salvage angioplasty for a number of reasons. Firstly, high-risk patients, including those with a previous myocardial infarction who are perhaps more likely to benefit from attempts to open a second vessel, were excluded. Secondly, patients in this trial were taken on for salvage angioplasty relatively late after the onset of chest pain. Thirdly, intra-aortic balloon counterpulsation was rarely used, but is now known to reduce the risk of arterial occlusion following salvage angioplasty.4 Fourthly, the trial was performed without modifying the prostacyclin inhibitors, such as abciximab (ReoPro®). These agents have been shown to be beneficial in high-risk angioplasty without increased risk of haemorrhage.5 Lastly, and most importantly, this trial was performed in the early 1990s before the modern coronary artery stent era. It is undoubtedly the case that the availability of coronary artery stents allows angioplasty in the context of AMI to be performed with greater safety and should go so far as to say that the results of the trials of immediate angioplasty following thrombo- lysis therapy, which universally demonstrated unfavourable outcomes with this strategy, have no relevance in the modern stent era. This is an area which commands further study. Our policy of performing salvage angi- oplasty in the context of <50% ST segment resolution in the worst lead 2 hours after the initiation of thrombolysis, based on the previously obtained modestly deduced favourable results, especially if the patient presents promptly, receives thrombolytic therapy and the 2-hour ECG is scrupulously reviewed. Our experience is that this policy can reduce mortality from an expected 17–20% to 5%. Thus, patients with persistent ST elevation following thrombolytic therapy should be considered early for
2 Purcell IF, Newall N, Farrer M. Change in ST segment elevation 60 minutes after thrombolytic initiation predicts clinical outcome as accurately as later changes. _Heart_ 1997;78:465–71.

Images in medicine

**Foreign body aspiration**

A 76-year-old woman with known squamous carcinoma of the post-cricoid region, previously treated with laryngopharyngectomy and radiotherapy, was referred to a tertiary hospital having aspirated her Blomsinger tracheo-oesophageal valve (size 10 mm, figure 1). Clinically she had a stridor, and was cyanosed, dyspnoeic and unconscious. Oxygen saturation was 85% on 60% inspired oxygen via a Venturi mask. Chest X-ray (figure 2) showed a massive left hydropneumothorax (pneumothorax was created by a previous aspiration) and the Blomsinger valve lodged at the right hilum. Fibre-optic bronchoscopy revealed the valve to be lodged in the right intermediate bronchus. When the valve was removed the patient rapidly improved, with an oxygen saturation of 98% on 40% inspired oxygen.

The anatomy of the bronchial tree is such that the right main bronchus is shorter and wider than the left, and it separates off from the vertical at about 25° compared to the left at 45°. This makes aspiration more common in the right lower and middle lobes.

**Figure 1** Blomsinger tracheo-oesophageal valve

**Figure 2** Chest X-ray

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