Letter to the Editors

An unexpected response to intravenous hydrocortisone succinate in an asthmatic patient

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A 39-year-old female nonsmoker was admitted to hospital with worsening cough, breathlessness, wheeze and purulent sputum production. She had a 17-year history of poorly controlled atopic asthma and in the preceding few years had required numerous courses of oral – but never parenteral – corticosteroids. Initial treatment consisted of oral prednisolone, nebulized bronchodilators, intravenous aminophylline and broad spectrum antibiotics. Two days later due to vomiting, impaired peak expiratory flow and persistent wheeze, she was prescribed parental corticosteroids. Minutes after a 100-ml saline infusion containing 200 mg intravenous hydrocortisone succinate (SoluCortef®) was commenced, she developed widespread erythema, tachycardia and orofacial oedema. Despite stopping the infusion and administering 10 mg intravenous chlorpheniramine, she complained of marked breathless and wheeze in conjunction with more widespread erythema. The patient was given intramuscular adrenaline (0.5 ml of 1 : 1000), which promptly relieved symptoms.

Sensitivity reactions and bronchospasm to intravenous corticosteroids containing succinate have previously been documented in both male and female asthmatics [1–3]. Although considered rare, the true extent of such reactions is unknown and no uniform mechanism has been identified [4]. Phosphate-containing corticosteroid preparations are not considered to be associated with allergic reactions [1], but can be associated with troublesome perineal pain in women (<http://www.bnf.org>).

This case is an important reminder to clinicians and nursing staff, that some patients can develop allergic reactions to parenteral corticosteroids containing succinate. As evidenced by our case, this can occur after even a small quantity is given by slow infusion. Whether in the future all corticosteroids should be formulated with a phosphate ester – albeit with a greater risk of developing perineal pain in women – is uncertain. With greater use of the ‘yellow card’ alert system in the British National Formulary (BNF), the frequency of both perineal pain and allergic reactions to phosphate and succinate-containing corticosteroids, respectively, may become apparent. Moreover, perhaps this uncommon adverse effect should be highlighted in future editions of the BNF.

References

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