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PHOTO QUIZ

Red and wet

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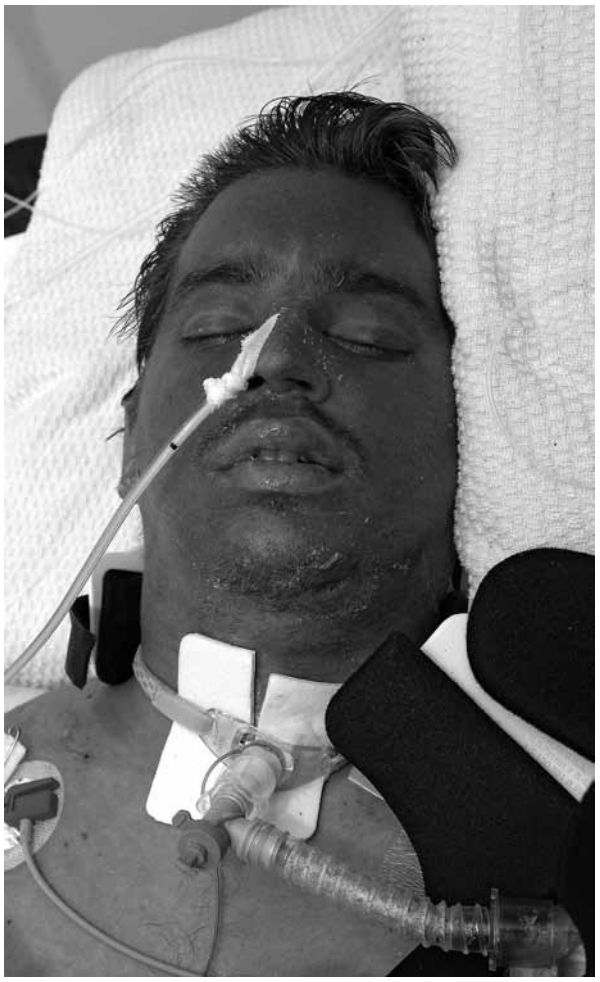
CASE REPORT

A 28-year-old man was admitted to our critical care department after a head-on collision with a car while riding his motorcycle. He suffered severe cerebral contusions as well as several major injuries including severing of this brachial vasculature, for which a Dacron interposition was inserted. Early in his admission, blood cultures grew coagulase-negative *Staphylococci* for which vancomycin was started with the intent to continue vancomycin for six weeks to prevent infection of this vascular prosthesis. Five weeks after admission, sputum cultures grew *Staphylococcus aureus* for which treatment with flucloxacillin was initiated. At the same time he was started on amitriptyline (for neuropathic pain) as well as metoprolol (for refractory sinus tachycardia). Six weeks after admission he developed a severe generalised erythema which was most notable in the face (*figure 1*). This was accompanied by generalised oedema, shock, fever, diarrhoea, renal failure, hepatitis and acute lung injury.

WHAT IS YOUR DIAGNOSIS?

See page 231 for the answer to this photo quiz.

Figure 1. *Generalised redness accompanied by severe oedema and multiorgan failure*



***The patient's guardians provided written permission for publication of this photo.**

ANSWER TO PHOTO QUIZ (PAGE 228)

RED AND WET

DIAGNOSIS

Initially, the diagnoses of vancomycin-related red man syndrome and severe penicillin allergy were suspected. Red man syndrome has often been associated with rapid infusion of the first dose of the drug and was initially attributed to impurities found in vancomycin preparations.[1] Our department has strict protocols in place regarding the vancomycin infusion rate and since vancomycin-induced red man syndrome is almost exclusively related to rapid infusion of the drug, this diagnosis was unlikely. Furthermore, since the patient had been treated with penicillins before, an allergic reaction to penicillin was deemed unlikely, although it could not be excluded. The day after the initiation of the syndrome, peripheral blood leucocytes were markedly elevated at 46 x 10^9/l and the blood smear showed 36% eosinophils. The clinical picture of erythema, systemic symptoms and marked eosinophilia was most consistent with the drug rash with eosinophilia and systemic symptoms (DRESS) syndrome.[2] Recently started medications, as noted above, were immediately discontinued and the patient was treated with steroids, and H1 and H2 receptor blockers. Hereafter, the erythema and systemic symptoms regressed over the course of several days. A few weeks later the patient was re-challenged with vancomycin (because of infectiological necessity at the time) as well as penicillins, which did not result in recurrence of the rash. Therefore the occurrence of DRESS syndrome in this patient was most likely related to the administration of amitriptyline or metoprolol. Of these, the DRESS syndrome has only been described secondary to amitriptyline use.[3] Unfortunately, a definite diagnosis of drug allergy by positive patch tests to amitriptyline was not demonstrated due to the fact that the patient was transferred to another hospital.

Drug-induced rash with eosinophilia and systemic symptoms is a life-threatening adverse reaction characterised by skin rashes, eosinophilia and multiorgan failure. The syndrome develops two to six weeks after initiation of administration of a specific drug. So far, the only undisputed way to treat severe hypersensitivity reactions is prompt withdrawal of the offending drug.[4] Therefore, early recognition of the syndrome is paramount to prevent organ failure.

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