ANAPHYLACTIC SHOCK RESULTING FROM CASUALTY SIMULATION

A Case Report

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To add realism to medical exercises, casualty simulation (cas-sim) is being increasingly practised. I wish to report a potentially fatal reaction to one of the dyes used in the make-up.

Case report

A regular soldier, aged 19 years, weight approximately 65 kg, volunteered to be a casualty with simulated 40% burns to legs, chest and abdomen. Whilst a make-up stick containing carmine red was being applied to his trunk it was noticed by the simulators that he was becoming unwell. He was immediately given 8 mg chlorpheniramine (Piriton) orally and transferred a distance of three miles to the 'No Duff' medical area. On arrival, but whilst still in the ambulance, it was realised that he required treatment beyond the capabilities of 'No Duff' area. He was therefore transferred a few yards to the exercise operating theatre.

On examination he was shocked, confused and with an unrecordable blood pressure and tachycardia. Treatment consisted of high flow oxygen and intravenous fluids (1 litre Ringers Lactate and two litres Dextran 110). He was also given hydrocortisone 100 mg IV and perphenazine 2.5 mg IV. During resuscitation, make-up removal cream was obtained from the cas-sim point and the make-up removed.

With treatment he rapidly improved and was evacuated to the local hospital. Unfortunately, because this occurred abroad and during an exercise, further follow-up was not possible. He was verbally warned not to participate again in cas-sim exercises.

Discussion

From subsequent discussion it would appear that many Regular and Territorial Army officers are unaware of the hazards of cas-sim despite its widespread knowledge amongst simulators. Greater awareness and facilities for treating patients should be available. It is difficult to know how simulators should treat an adverse reaction. If evacuation is to take some time, chlorpheniramine will do no harm, but its oral absorption in the shocked patient is questionable. Adrenaline probably remains the drug of choice in anaphylactic shock^{1,4}. Administration of $\frac{1}{2}$ ml 1 in 1000 adrenaline (0.5 mg) SC is the route of choice for RAMC simulations (IM administrations carrying the risk of inadvertent IV injection).

Medical officers on these exercises must be equipped with adequate supplies

of drug and IV fluids (only out-of-date supplies of drugs, perphenazine and Dextran 110 were available) if unnecessary loss of life is to be prevented.

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