Red child syndrome

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SUMMARY An acute overdose of rifampicin in an 18 month old white infant is described. The characteristic signs of the syndrome: orange-red discolouration of the skin, urine, and tears, facial pruritus, and periorbital oedema were present and the outcome was uneventful. Paediatricians should be aware of this peculiar yet easily identifiable syndrome.

Toxic reactions to an overdose of rifampicin have been well described in a few adults,[1 2] an adolescent girl,[3] and in 19 children in a day care centre.[4] Excluding one death associated with an extremely high overdose (60 g)[2] all the other cases had uneventful outcomes. As far as we know this is the first report of the 'red child (man) syndrome' described in European paediatric literature.

Case report

An 18 month old white girl was brought to the emergency unit because of intense facial glow and pruritus, severe periorbital oedema, and generalised orange-red discolouration of the skin and urine. Her mother was being treated for pulmonary tuberculosis and the infant was being regularly treated with rifampicin because of a positive tuberculin patch test. Three and a half hours before admission she had been found playing with an empty bottle of rifampicin, which should have contained about 100 ml of a 2% suspension (2 g). One hour later facial glow and pruritus appeared, and in the next two hours rapidly increasing periorbital oedema was noticed. As the whole body skin, urine, saliva, and tears progressively appeared with an orange-red discolouration she was brought to the hospital.

On admission she was apparently well, alert, and had no other abnormal signs. During her hospital stay she passed red stools of normal consistency and had no vomiting or fever. Her haemoglobin concentration was 113 g/l and the white cell count was $22{\cdot}9\times10^9$/l with 66% neutrophils; glutamic oxaloacetic transaminase activity was 20 U/l. She was discharged 12 hours later. The signs and symptoms persisted for a further 24 hours, periorbital oedema disappearing first.

When she was re-examined one month later she had no complaints and was in good health. Plasma protein concentration, serum transaminase, lactic dehydrogenase, γ-glutamyltranspeptidase, and alkaline phosphatase activities were all within normal limits.

Discussion

The syndrome due to an acute overdose of rifampicin is still unlikely to be recognised by many paediatricians. In the case reported here the association between rifampicin intake and orange-red discolouration of the skin, urine, and tears was strongly suggested by the history given by the mother. The severe periorbital oedema and the facial pruritus (two of the signs of rifampicin toxicity), however, were not recognised as such by the attending paediatrician who ascribed them to an allergic reaction.

Rifampicin has an important place in the treatment of tuberculosis as well as in the prophylaxis of meningococcal infection. More recently it is also being recommended for the prevention of *Haemophilus influenzae* type b disease.[5] Therefore an increase in the number of cases of accidental rifampicin overdose intake must be expected. In the experience of our emergency unit identification of the drug in acute drug intoxication has not been possible in one fifth of the cases (J Sequeira, personal communication).

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