



Short Communication

Cutaneous adverse reaction to ciprofloxacin precipitated by ingestion of alcohol in a tetraplegic patient

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We have been using oral ciprofloxacin to treat complicated urinary infection in adult patients with spinal cord injury and neuropathic bladder. Biceps tendinitis and rupture of the long head of biceps brachii is a potential serious adverse event associated with ciprofloxacin therapy.¹ This adverse event can restrict severely the functional independence of a spinal cord injury patient, especially transfers in and out of a wheelchair. Cutaneous adverse reactions occur in 0.8–1.9% of the patients taking ciprofloxacin. The skin reactions are commonly rashes and pruritus.² Skin rash constitutes 38.84% of the adverse drug reactions to ciprofloxacin, ofloxacin, and norfloxacin as reported in the United Kingdom from the marketing of the drugs to 31 December 1993.³

We report a tetraplegic patient who had been taking recommended doses of ciprofloxacin manifesting blotches all over the body soon after ingestion of ethanol. The Committee on Safety of Medicines/Medicines Control Agency have received no reports of skin reactions associated with an interaction between ciprofloxacin and ethanol (CSM, Personal communication).

A 17-year-old male sustained bifacetial dislocation of C4/C5 while playing rugby. He developed complete tetraplegia requiring constant ventilatory support. He received oral ciprofloxacin (250 mg twice a day) for urinary infection on a few occasions and did not manifest any side effect to ciprofloxacin. He developed stones in the left kidney and extracorporeal shock wave lithotripsy (ESWL) was planned for the renal calculi. Prior to ESWL, he underwent cystoscopy and left ureteric stenting. Following this endoscopic procedure, he was prescribed ciprofloxacin 250 µg twice a day to be taken by mouth at 08.00 h and at 17.00 h. At 21.30 h on the next day, he developed red blotches all over the body (Figures 1 and 2). He noticed the blotches over his face in the mirror and therefore, brought this to the attention of health professionals. These blotches appeared about 10 min after he had taken two cans of his favourite brand of

ethanol (4.7%). He did not feel unwell or drowsy. He did not experience itching over the blotches on his face. His blood pressure was 90/34 mmHg; pulse rate was 118 per minute; temperature was 34.8°C. The red blotches gradually faded away over a period of 30 min. Thereafter, he completed the course of ciprofloxacin without any untoward effect. We advised him to avoid alcohol whenever he is prescribed ciprofloxacin.

Subsequent to this episode, this patient drank his favourite brand of ethanol while he was taking his other usual drugs that included baclofen, amitriptyline, senna, bisacodyl, vitamin C, Fybogel, and oxybutynin. He did not develop blotches over his body during these occasions.



Figures 1 and 2 show red blotches over the face, arms, chest, abdomen, and lower limbs in a young tetraplegic patient who is ventilator-dependent. Tracheostomy is in place for mechanical ventilation

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Figure 2

This patient was prescribed the recommended dosage of ciprofloxacin. Ciprofloxacin levels could not have exceeded the therapeutic ranges because he did not have renal insufficiency and he was not taking diuretics concomitantly. The time sequence of inges-

tion of ethanol and appearance of cutaneous side effect raises the possibility of a causal association between alcohol and the skin reaction. Since he did not develop skin reaction when he took ciprofloxacin prior to this episode and subsequent to this event, we suspect that ingestion of ethanol precipitated the appearance of blotches all over his body when he had been pre-exposed to ciprofloxacin.

This patient was lucky that the adverse drug reaction to ciprofloxacin was self-limiting, and subsided without any sequel. An analysis of spontaneous notification of adverse drug reactions to fluoroquinolones from the marketing of the drug to 31 December 1993 was carried out by Royer.³ The evolution of the diseases induced by ciprofloxacin shows that the outcome was favourable in 82%; sequelae, mainly renal diseases and tendinitis with rupture occurred in 1%; the outcome was unknown in 14%; and deaths occurred in 3% of the cases.

References

- 1 Szarfman A, Chen M, Blum MD. More on fluoroquinolone antibiotics and tendon rupture. *New England Journal of Medicine* 1995; **332**: 193.
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- 3 Royer RJ. Adverse drug reactions with fluoroquinolones. *Therapie* 1998; **51**: 414–416.