Short reports

A case of quinine self-poisoning in a boy

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SUMMARY An 11-year-old boy swallowed some of his father's quinine tablets. The use of an efficient toxicology screening service permitted an early diagnosis and appropriate management.

Quinine is widely used in the treatment of night cramps;¹⁻² its toxicity is well described.³ We report the clinical findings and the detection of quinine self-ingestion in an 11-year-old boy who had consumed some of his father's quinine tablets.

Case report

A healthy 11-year-old boy developed tinnitus in his left ear of short duration. He soon felt dizzy, weak, and nauseated. He was noted to be pale, hot, and sweating and had a vacant facial expression. There was no history of trauma, convulsions, or disturbance of consciousness. The boy and his parents denied any ingestion of drugs.

On admission to hospital, the boy was drowsy but responded to questioning. His oral temperature was 35.5°C. Blood pressure was 110/70 mmHg and heart rate 104/min. He had an unusually broad-based gait and slurred scanning speech. Vision was not impaired and his physical condition was otherwise normal. His symptoms and signs disappeared within 24 hours and he made an uneventful recovery.

Salicylates were undetectable in his plasma. The urine initially contained moderate numbers of red cells and excess protein, but this did not last. An aliquot of urine was analysed at the toxicology laboratory, Southmead General Hospital, using a screening procedure developed to detect drugs in urine. After thin-layer chromatography of a basic urine extract, a reference value similar to that of quinine was found. In solution in 0.1 mol/l sulphuric acid, it gave a pale blue fluorescence under ultraviolet radiation with an ultraviolet absorption spectrum, identical with that obtained from a sample of quinine. The boy subsequently admitted taking his father's quinine tablets and said he had been

curious about them. His father took them for 'night cramps'.

Discussion

Quinine is a rare cause of childhood poisoning, but as little as 1 g chloroquine (which also contains the quinoline nucleus) has been reported to be fatal in children.⁴ Peak plasma concentrations occur between 1 and 3 hours after a single oral dose of quinine and the drug is excreted in the urine almost completely within 24 hours.⁵ This report stresses the need to collect biological samples early when investigating a case of suspected self-poisoning.

Tinnitus, vertigo, confusion, sweating, and pallor are well-known features of quinine toxicity,³ whereas hypothermia is an unusual finding. The sudden onset of such symptoms and signs in a healthy person followed by spontaneous improvement should always suggest self-poisoning. The availability of an efficient toxicology screening service which showed the characteristic fluorescent appearance of cinchona alkaloids on thin-layer chromatography of this boy's urine was crucial in establishing the correct diagnosis and prevented the need for further investigations.

We thank Mr C N Chapman for performing the toxicology screen on the urine.

References

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