Lesson of the Week

Visual hallucinations in children receiving decongestants

R J SANKEY, A J NUNN, J A SILLS

Actifed (triprolidine and pseudoephedrine; Wellcome) and Actifed compound linctus (with codeine) are commonly prescribed decongestants in hospital and community practice. They are also often bought from pharmacies without prescription. They are used for their efficacy and because they are believed to be innocuous at the recommended dosage. Side effects are seldom reported and usually occur when inappropriate doses have been taken.

We report on three children aged 2½-3½ who suffered severe and disturbing visual hallucinations for periods of from one week to four months after taking recommended doses of Actifed preparations. The children were assessed to exclude other possible causes of hallucinations, especially other drugs and toxins, but none was identified.

Case reports

Case 1—A 3½ year old girl had received 5 ml doses of Actifed diluted to 50% without problems in the past. Six hours after receiving a single dose she presented screaming and inconsolable, complaining of seeing crabs, snakes, and spiders. She said that insects were biting her and that a crocodile was making a hole in her back (a sibling had spina bifida). When examined she was pushing invisible objects off herself and stamping on other invisible objects on the floor. Examination when she was lucid showed no abnormality. Her hallucinations lasted intermittently in occasional short spells for four months, having been particularly troublesome for one week.

Case 2—A 3 year old girl received two 5 ml doses of Actifed during the night. The following day she suddenly developed episodes of uncontrollable terror, complaining of seeing spiders and insects. On examination she was intermittently pushing and brushing away invisible objects and also hitting out and stamping. The episodes continued intermittently for three days.

Case 3—A 2½ year old boy with catarrh and frequent coughs and fevers was given Actifed and Actifed Compound in 5 ml doses at night whenever he was feverish. He was described as always being delirious when ill, seeing spiders and insects in bed and pushing them away. This was initially thought to be due to fever, but when promethazine (Phenergan) was substituted for Actifed there were no further episodes despite his fever.

Alder Hey Children's Hospital, Liverpool L12 2AP

R J SANKEY, MB, MRCP, paediatric registrar
A J NUNN, BPHARM, MPS, principal pharmacist
J A SILLS, MB, MRCP, consultant paediatrician

Correspondence to: Dr R J Sankey, lecturer in child health, Department of Child Health, Medical School, Ninewells Hospital, Dundee DD2 1UB.

Ask about decongestant usage when faced with a child presenting with visual hallucinations

Comment

Visual hallucinations are uncommon in young children, and their occurrence leads to considerable alarm if the cause is not recognised. Many parents do not regard Actifed and other decongestants as drugs when bought over the counter, and specific inquiry must be made when obtaining a drug history. In addition, we have anecdotal evidence of an increased incidence of nightmares, night terrors, and behaviour problems in children taking Actifed but this is difficult to evaluate as these problems are common among children.

Pseudoephedrine is a stereoisomer of ephedrine with less vasopressor activity and fewer side effects affecting the central nervous system. This has been confirmed in studies using normal clinical doses.^{1 2} Severe side effects of the central nervous system, such as paranoid psychosis,³ chronic hallucinosis,⁴ and euphoria⁵ have been reported after overdose or abuse of pseudoephedrine preparations administered by mouth or intranasally. Insomnia and agitation have been reported in children taking Actifed, but extreme agitation and confusion in a child with phenylketonuria may have been due to abnormalities in catecholamine metabolism.⁶

These cases suggest that pseudoephedrine may produce visual hallucinations in children even when administered at the usual clinical dose.

References

- Empey DW, Bye C, Hodder M, Hughes DTD. A double-blind crossover trial of pseudoephedrine and triprolidine, alone and in combination, for the treatment of allergenic rhinitis. *Ann Allergy* 1975;**34**:41-6.
- Bye C, Dewsbury D, Peck AW. Effects on the human central nervous system of two isomers of ephedrine and triprolidine and their interaction. *Br J Clin Pharmacol* 1974;**1**:71-8.
- Leighton KM. Paranoid psychosis after abuse of Actifed. *Br Med J* 1982;**284**:789-90.
- Escobar JJ, Kamo M. Chronic hallucinosis from nasal drops. *JAMA* 1982;**247**:1859-60.
- Diaz MA, Wise TN, Semchishyn GO. Self-medication with pseudoephedrine in a chronically depressed patient. *Am J Psychiatry* 1979;**136**:1217-8.
- Spielberg SP, Schulman JD. A possible reaction to pseudoephedrine in a patient with phenylketonuria. *J Paediatr* 1977;**90**:1206.

(Accepted 13 October 1983)