3. Lehrer RI, Howard DH, Sypherd PS, *et al*. Mucormycoses: UCLA Conference on mucormycosis. Ann Int Med 1980, 93: 93-108.
4. Keye JD Jr, Magee WF. Fungal disease in a general hospital: A study of 88 patients. Am J Clin Pathol 1956, 26: 1238-1253.
5. Agha FP. Mucormycosis of colon: Early diagnosis and treatment. Am J Roentol 1985, 145: 739.
6. Lyon DT, Schubert TT, Manita AG, *et al*. Phycomycosis of gastrointestinal tract. Am J Gastroenterol 1979, 72: 379-394.
7. Schulman A, Borman P, Kaplan C. Gastrointestinal mucormycosis. Gastrointest Radiol 1979, 4: 385-388.
8. Daraheimen IP, Fouche W, Nel C. Gastric mucormycosis in diabetic patient. S Afr Med J 1979, 48: 838-839.
9. Calle S, Klatsky S. Intestinal phycomycosis (mucormycosis). Am J Clin Pathol 1966, 45: 264-272.
10. Meyer RD, Armstrong D. Mucormycosis-Changing status. CRC Crit Rev Clin Lab Sci 1973, 4: 421-451.

An Unusual Case of Atropine Toxicity

V.J. Joseph
S. Rekha
S.D. Subba Rao
M.K. Chandrasekhara

The use of cycloplegic agents in children may occasionally lead to mild side effects. Redness and edema of the eyelids, or mild elevation of body temperature are commonly encountered. The involvement of central nervous system, following a single topical application of 1% atropine sulphate ointment, is a very rare occurrence. We are reporting one such case.

From the Department of Pediatrics, St. John's Medical College Hospital, Bangalore 560 034.

Received for publication September 11, 1990; Accepted February 4, 1991

Case Report

A 3-month-old male infant, weighing, 2.5 kg was hospitalized with sudden abdominal distension, restlessness, abnormal movements, breathing difficulty, irritability, excessive crying, and refusal of feeds of one hour duration. He was born to a 2nd gravida mother, at 30 weeks of gestation and weighed 1000 g. He had septicemia with stage II necrotizing enterocolitis and Stage II retinopathy of prematurity (ROP). The child was on regular follow up. To reassess the progression of ROP, 1% atropine sulphate ointment was applied 1½ h prior to the onset of the presenting symptoms (approximate quantity 0.25 mg/kg of atropine sulphate).

At admission, he was drowsy, febrile and cyanosed. He had tachypnea, respiratory rate (72/min), tachycardia (heart rate 180/min), hot and flushed extremities and fixed dilated pupils. He continued to have generalized tonic clonic convulsions. His abdomen was distended, bladder palpable and bowel sounds absent. Blood counts, ESR and urine examination were normal. Blood culture was sterile and ECG showed sinus tachycardia.

With the above history and temporal relationship to application of atropine ointment, a diagnosis of atropine toxicity was made.

His symptoms were controlled with an intravenous administration of 0.12 mg of neostigmine (physiostigmine was not

available). The convulsions were controlled with IV diazepam. Within a few minutes of IV administration of neostigmine, his pulse rate dropped to 130/min and he passed urine. Pupils remained dilated and fixed. A repeat dose was administered after 8 as his symptoms recurred. By 18, his general condition stabilized and pupils become sluggishly reactive but remained dilated. After 48 h of hospital stay and confirming nonprogressive stage II ROP, he was discharged. The child is now 6 months old and doing well with normal vision and development.

Discussion

Unusual sensitivity to therapeutic doses of atropine is rarely encountered. Factors predisposing to increasing sensitivity include Down's Syndrome, hot and humid climate, children less than one year, paralytic ileus and bronchial asthma. Atropine Sulphate intoxication leading to convulsions and coma have been reported with doses of 0.09 mg/kg and death has resulted from a dose as low as 0.2 mg/kg.(1) Atropine toxicity from oral administration of atropine methonitrate (Euemydrin) drops(2) and as a result of use of homatropine and atropine sulphate drops and ointment(3) has been reported. Following ophthalmic application, absorption may occur through conjunctival sac or following swallowing of drops after it tracks down through the nasolacrimal duct(3). The treatment is symptomatic and physiostigmine may be used in doses of 0.5 mg to a maximum of 2 mg(1,2).

In our case, atropine toxicity resulted from a dose of 0.25 mg/kg but recovered completely. With improving neonatal care, opthalmic examination for detecting retinopathy is being more frequently done in India. We feel that atropine preparations should be used with caution especially in premature infants.

REFERENCES

1. Ellenborn MJ, Barceloux DJ. Plants, mycotoxins and mushrooms. *In:* Medical Toxicology; Diagnosis and Treatment of Human Poisoning. New York, Elseview Science Publishing Company, 1988, pp 1257-1265.
2. Meerstadt PWD. Atropine poisoning in early infancy due to Eumydrin drops. Br Med J 1982, 285; 196-197.
3. Hogngel O. Toxic effects of atropine and homatropine eyedrops in children. N Eng J Med 1961, 264: 168-171.

Hydatid Disease

M. Verma
D. Singh
J. Chhatwal
R.S. Beri
N. Kumar
M.C. Deodhar
T. Singh
D.K. Gupta

The diagnosis of hydatid disease is often not considered in children, particularly in nonendemic areas. The initial diagnosis

From the Department of Pediatrics and Pediatric Surgery, Christian Medical College, Ludhiana.

Reprint requests: Prof. Manorama Verma, Professor and Head, Department of Pediatrics and Pediatric Surgery, Christian Medical College, Ludhiana 141 008.

Received for publication October 26, 1990; Accepted February 4, 1991