An Unusual Cause of Acute Confusional State

We are reporting an unusual case of accidental amphetamine ingestion in a 2 year 8 month old child, presenting with acute confusion.

Her father brought this female child to the Accident and Emergency Department with history of acute confusion for paediatric assessment. The child had been agitated for the last 12 hours, was difficult to settle and kept saying, "don't want it". She had previously been well. On examination she was agitated, apyrexial and constantly talking with heart rate of 148/min. Her pupils were dilated but equal and sluggishly reactive. She had no neck stiffness and rest of the systemic examination was unremarkable. The main differential diagnoses at this stage were probable encephalitis and acute poisoning. Her full blood count, urea and electrolytes, liver function tests, coagulation screen, paracetamol and salicylate levels, and venous gas were all normal.

After initial denial, father revealed that the child's mother had been using amphetamine for years. Mother confessed that she had a paste of amphetamine powder in the orange juice around 2-3 hours before the child started to behave unusually. Mother had left the child alone in the room with the orange juice and went to the kitchen for 5 minutes. Mother was not sure how much orange juice the child could have drunk. The child was monitored closely. Urine was sent for toxicology. After 17 hours of admission, the child started to interact normally, talk appropriately, pupils were reacting normally and heart rate settled. Next day, the child was back to normal and was discharged to foster care. The urine came back positive for amphetamine. The child has been reported to be doing well on follow -up.

Amphetamine ingestion in a child of <5 years of age has not been previously reported. There is only a small selection of articles which focus on adolescents [1-3]/ adults and methamphetamine. The main intention to report this the case is to raise the awareness of acute intoxication as a differential diagnosis in a child who presents with acute confusion.

HARISH KUMAR SREENIVASA AND KARNAM SUGUMAR
Department of Paediatrics, Royal Preston Hospital, Lancashire Teaching Hospitals NHS Foundation Trust, Sharoe Green Lane, Fulwood, Preston, Lancashire, PR2 9HT, UK.
drsharishkumar@yahoo.co.in

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Unusual Cause of Neonatal Respiratory Distress

We described a female infant weighing 2000 g born by vaginal delivery at 35+5 weeks' gestation to a woman with urine culture and vaginal swab positive for *E. Coli* . At 54 hours of age, the baby developed respiratory distress syndrome associated with persistent rhinitis and productive cough. At the beginning we suspected sepsis with pneumonia and antibiotic treatment was commenced. Despite more courses of antibiotic treatment no significant radiological improvement happened, and rhinitis and productive cough were persistent. Since immunodeficiencies, cystic fibrosis, and pulmonary malformation were ruled out earlier, we performed a nasal brush biopsy in the attempt to diagnose primary ciliary dyskinesia (PCD). Findings consistent with PCD were found. After being discharged at the age of 37 d, the baby was followed up in our outpatient respiratory facility. During this time, physiotherapy has been performed twice a day, and just an episode of pneumonia occurred at the age of 6 month of life. Nasal brush biopsy was repeated at the age of 12 months and confirmed the ultrastructural defect. The baby is now 13 months old, has a satisfactory growth and a normal neurodevelopmental outcome.

PCD is an extremely rare cause of neonatal respiratory distress. It is usually an autosomal recessive disease with a prevalence of 1:15-30000 live births, but this is likely to be underestimated because underdiagnosis is common [1]. PCD is characterized by recurrent infections of upper and lower respiratory tract such as pneumonia, sinusitis, otitis media, and in almost half of the cases is associated with situs inversus (Kartagener syndrome) [2]. PCD diagnosis is rarely made in the newborn infant, and is often delayed until late childhood or even adulthood despite a history of unexplained respiratory distress in the neonatal period [1-5]. The association of PCD with neonatal respiratory distress suggests that motile cilia are critical for effective clearance of fetal lung fluid [5].

In our case, respiratory distress syndrome was associated with persistent rhinitis and productive cough. The early diagnosis of PCD is difficult and requires a high index of suspicion. We want to emphasize the diagnostic role of rhinitis and productive cough, that are both very rarely seen in normal neonates, but are common from the first few days of life in patients with PCD. These two clinical symptoms should increase the suspect especially when they occur simultaneously in a single patient and/or in an healthy newborn without respiratory risk factors. Early diagnosis allows an adequate program of treatment and follow-up, consisting of physiotherapy for airway clearance and microbiological surveillance with aggressive treatment of inter-current infections, in order to preserve the lung function in this genetic condition as long as possible [1].

ELOISA TIBERI AND ENRICO ZECCA
Department of Neonatology,
Catholic University of the Sacred Heart – Rome,
Largo A. Gemelli 8 00168 Roma – ITALIA.
eloisatiberi@yahoo.it

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Tetanus Vaccine in UIP in India

The World Health organization has recommended childhood immunization with Teatuns vaccine (or TT containing vaccines) with a 5 doses schedule [1]. This included a 3 doses in infancy as DPT, followed by booster at 4-7 year and another dose at 12-15 years of age [1]. However, the national immunization schedule in Universal Immunization Program (UIP) in India, recommends at least 7 doses of Tetanus vaccine are administered in various combinations (3 doses of DPT in infancy, 2 booster doses at 16-24 months and 5-6 years of age, 2 TTs at 10 and 16 years of age). The pregnant women get at least 2 additional doses in her life time for first pregnancy [2]. Adults get additional TT doses following injuries. This is suggestive that in India the TT vaccine is being overused for vaccination.

As a practitioner, I would like to know from the experts why booster of TT is given in India at 16-24 months, while it is not recommended by WHO? Why immunization schedule for Tetanus vaccine has 7 shots against WHO recommendation of 5 doses? Are these extra doses really necessary? For pregnant women and adults, who receive extra doses following injuries, does the current schedule poses any risk of hyper-immunization?

MONIKA PURI
Department of Community Medicine,
Lady Hardinge Medical College,
New Delhi 110 001, India.
monikapuri@gmail.com

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REPLY

WHO has recommended 5 doses of tetanus toxoid for childhood immunization: the primary series of 3 doses of DTP3 (DTwP or DTaP) in infancy (age <1 year), with a booster dose of a tetanus toxoid-containing vaccine ideally at age 4-7 years and another booster in adolescence, e.g. at age 12-15 years. However, it has also advised a sixth dose