

DISCUSSION: Infants who present with lethargy and poor feeding undergo routine testing and

LETHARGY IN AN INFANT: A CASE OF INFANTILE BOTULISM IN CONNECTICUT. JB Rubin. Yale Medicine and Pediatrics Residency Program, New Haven and Waterbury, CT.

LEARNING OBJECTIVES:

1. Recognize lethargy as a symptom of infantile botulism.
2. Understand the pathophysiology of infantile botulism.
3. Know the appropriate treatment and management of infantile botulism.

CASE: A 27-day-old, full-term male presented to the ED with one day of lethargy and decreased feeding. No specific infectious risk factors were identified. Blood, urine, and CSF cultures were obtained and he was treated with antibiotics for presumed sepsis. Further review of systems was positive for constipation, drooling, and weak cry. Within three hours of admission, he became increasingly lethargic and hypotonic with decreased reflexes, minimal responsiveness to stimuli and pooling secretions. He required emergent intubation and PICU transfer. Given the constellation of symptoms, a clinical diagnosis of infantile botulism was made. Stool studies were sent and BabyBIG, botulinum immune globulin, was administered. All other studies, including brain ultrasound, MRI, and cultures, were negative. His neurologic status gradually improved and he was successfully extubated four days later. On hospital day 10, stool studies confirmed the diagnosis of infantile botulism.

antibiotic treatment for sepsis. However, as demonstrated in this case, these symptoms may represent infantile botulism. While a rare entity, with ~ 110 US cases annually, infantile botulism typically occurs in infants 2 to 3 months of age. It is caused by *Clostridium botulinum*, a bacterium which has a strong affinity for an infant's gastrointestinal tract. *C. botulinum* releases botulin, a neurotoxin, which irreversibly binds to the neuromuscular junction at motor nerve terminals and inhibits release of acetylcholine. This results in clinical symptoms ranging from constipation, lethargy, decreased feeding, and drooling to the more ominous floppy tone, respiratory distress, and pooling secretions. It is classically associated with honey ingestion, farm soil or dust exposure. Yet, in one retrospective study only 15% of cases had documented honey ingestion and 40% had known soil exposure, leaving many idiopathic cases. Confirmatory stool studies are diagnostic, but take upwards of 7 to 10

days, so clinical diagnosis is key. Treatment includes supportive care and BabyBIG, an immune globulin that neutralizes toxin, which decreases average length of intubation, ICU and hospital stay. While infantile botulism is most commonly reported in CA (50%), UT, and PA, this is the second case at Yale within a 6 month period. This case serves as a cautionary tale that lethargy in infants, while classically associated with sepsis may represent early signs of infantile botulism. Awareness, rapid clinical diagnosis, and intervention are paramount to improved clinical outcome.