



Bulletin No. 10

July 24, 1987

## Infant Botulism - Alaska's First Documented Case

In June, an alert Anchorage pediatrician notified our office of a possible case of botulism in a three-month old Valdez resident. The infant presented to Providence Hospital with a 9 day history of constipation, increasing lethargy, and decreasing muscular tone. The mother reported a decreased suck reflex, inability to swallow, choking, a droopy head and a weak cry. These symptoms developed over 3 days, until on June 18, the infant's condition rapidly deteriorated, and she was flown to Anchorage.

On physical exam, the infant showed decreased muscular tone, weak but symmetrical reflexes, ptosis, dysphagia, no rectal tone, and absence of bowel sounds. The infant suffered no respiratory depression and could still urinate. Laboratory tests showed normal electrolytes, liver and renal functions, and a normal CBC. In addition, the CSF was clear with normal protein and sugar levels. The infant's stool, obtained by sterile enema, was positive for *Clostridium botulinum* type B, at Centers for Disease Control, Atlanta, Georgia. Two successive stools were also positive for type B. After 6 days in the hospital, the infant was released. Although weak, the patient is recovering uneventfully at home.

Although the infant had been mostly breast-fed, she had also consumed some well water, city tap water, and Prosobee formula when she was 6-weeks old. In addition, she drank small amounts of sterile water obtained from the hospital after her birth. No honey, corn syrup, or homemade sugar water was fed to the infant. The infant had eaten no solid foods. After the infant was constipated for 7 days, on June 16, the mother fed her some dark Karo syrup mixed with water.

This is Alaska's first documented case of infant botulism. A possible case was reported in 1981. Infant botulism was first recognized as a distinct clinical entity in 1976. Although Alaska has the highest rate of botulism in the world in native adults who have consumed traditionally prepared foods, no cases of botulism in infants have been previously confirmed in Alaska. Between 1976 and 1985, 571 cases of infant botulism from 41 states were reported to Centers for Disease Control, Atlanta, Georgia. For 1986, the preliminary number of cases is 75. To date, infant botulism has been confined in infants only under one year of age. Many cases are misdiagnosed.

Illness usually begins with constipation, followed by lethargy, poor feeding, ptosis, difficulty in swallowing, and loss of head control. Generalized weakness leads to the floppy baby syndrome. Respiratory insufficiency and arrest can occur. Unlike foodborne botulism where an intoxication due to ingestion of pre-formed botulinum toxin occurs, infant botulism results from colonization of the gut by the botulinum bacillus with subsequent *in vivo* toxin production. Most cases of infant botulism were caused by types A or B, a few have resulted from type F or type B/F toxin. Although excretion of the organism from the patient's feces can occur for weeks to months after onset of illness, no secondary person-to-person transmission has been documented.

The source for this infant's botulism remains unknown, as is true for the majority of cases nationwide. Approximately 15 percent of the cases of infant botulism in the United States have been linked to honey fed to infants who later developed botulism. *Clostridium botulinum* spores matching the type of *Clostridium* found in the infants' stools were recovered in a few cases. Honey is the one identified risk factor associated with infant botulism and should not be fed to infants less than 12 months of age. For the majority of cases, the source remains unknown.

The case fatality rate of hospitalized cases in the United States is 3 percent. Intensive pediatric support is usually necessary. Botulinum antitoxin is usually not used because of the hazard of sensitization and anaphylaxis. The role of antibiotics, if any, has not yet been established.

Babies who present with constipation, bulbar palsies, especially poor feeding, feeble cry, hypotonia, and weakness should be evaluated for possible infant botulism. Examination of feces for *C. botulinum* organisms and toxins is essential for diagnosis. Testing is available free-of-charge. Suspected or diagnosed cases should be reported immediately to the Section of Epidemiology, 561-4406.

(Reported by Gerry Schriever, M.D., Anchorage.)