

FIRST CASE REPORT OF INFANT BOTULISM IN TAIWAN AREA

A 3-month-old baby girl of Taipei County was admitted to Tri-Service General Hospital on March 19, 1988 with a diagnosis of bronchial pneumonia based on the clinical symptoms and signs of fever,

cough, poor feeding and mobility, moist rales over both lower lung fields and mild infiltration as shown on a chest X-ray. Patient had been treated by GP for upper respiratory tract infection for three days, but without success.

Physical examination of patient during admission revealed ptosis, sluggish response to light reflex in pupils, moist rales over both lower lung fields, absence of bowel sound, poor mobility of extremities and diminished deep tendon reflex. All reports of routine laboratory examinations were within the normal limit except hyponatremia on the fourth day of admission due to an excessive secretion of antidiuretic hormone. Antibiotics (ampicillin and gentamycin) were given during the first three days of admission. However, the patient's condition did not improve and actually deteriorated. Patient developed floppy and weak muscle, poor sucking tone, constipation, enlarged pupils and lack of reflex responses to light and to deep tendon and pharyngeal stimulations. Infant botulism was suspected and clinically supported by the electrophysiological standard diagnostic criteria of botulism (diminished compound muscle action potential during general electrophysiological examination, but increment phenomenon¹ during continuous quick repeated electric stimulation). Both the mono valent butolinal antitoxin neutralization test of serum and repeated bacteria cultures of patient's stool confirmed the presence of type B butolinal toxin and organisms. A potency of toxicity as high as $LD_{50} > 10^5$ was noted after three days of observation.

Patient was given mainly conservative and supportive treatment after infant botulism was suspected. She responded to the treatments very well and was discharged from hospital three weeks after admission. Complete recovery was noted during the OPD follow-up four weeks after discharge.

Further epidemiology investigation revealed that patient was the 3,750 gm product of her mother's first conception through a full-term normal spontaneous delivery. No abnormal finding was discovered during the one and five minute vital assessments. There was no complaint of any special discomfort or any other ill effects during the confinement. Patient was breast-fed by her mother without addition of any supplementary food. Patient was the only victim of botulism in the whole family. Her parents are running a factory manufacturing, selling and maintaining belt conveyers and forklifts. The family lives in the penthouse of the factory, which is situated in a newly-built factory area without any farming or muddy places in the vicinity. The normal living activity of patient was totally confined to the factory area. We could not identify the source of the toxin or any high-risk factors related to this episode on the available data and information.

Reported by: Drs. Mong-Ling Chu, Chih-Chien Wang, Wen-Yu Liou, Pei-Her Twu, Department of Pediatrics, Tri-Service General Hospital, National Defense Medical Center; Dr. Chih-Lung Lee, Chief Hua-Chou Huang, Technician Yuang-Shen Lee, Division of Bacteria, National Institute of Preventive Medicine, Department of Health, Executive Yuan, R.O.C.