

This is the first outbreak of botulism in Taiwan in which toxin was identified in a commercial food product. One other isolated case of type A foodborne botulism was diagnosed in Taipei City in 1985, although toxin was not identified in the suspect food vehicle. As in the outbreak reported here, the case in 1985 was initially misdiagnosed. This fact points out the need for physicians in Taiwan to become more aware of the problem of botulism and report suspect cases to public health authorities.

In mainland China, botulism is a common problem. During the period 1958-1983, at least 986 outbreaks occurred resulting in more than 4,000 cases and 500 deaths<sup>1</sup>. The majority of these outbreaks (74%) were due to homemade fermented bean curd.

As a result of Taiwan's economic development, refrigeration has become widely available, decreasing the need for homemade preserved foods, and commercially preserved foods have become both convenient and affordable. As the demand for commercially preserved foods has increased, some unlicensed companies, such as the one responsible for the current outbreak, produce canned foods without proper equipment or training. This is both illegal and dangerous. In April 1986, the Department of Health announced a regulation change that will require all manufacturers of low acid foods to register and show proof of proper equipment and processing technique. It is hoped that this new regulation, which goes into effect in April 1987, will help prevent future outbreaks of foodborne illness in Taiwan.

Physicians and public health authorities should be aware that botulinum antitoxin is available from the Department of Health. To report suspect cases and request antitoxin, please call the following emergency telephone numbers (days 02-351-8530 or 02-396-2847; nights 02-762-5961 or 02-712-9210).

#### *References*

- 1 Shin Y, Chao S. Botulism in China. *Rev Infect Dis* 1986;8:984-90.

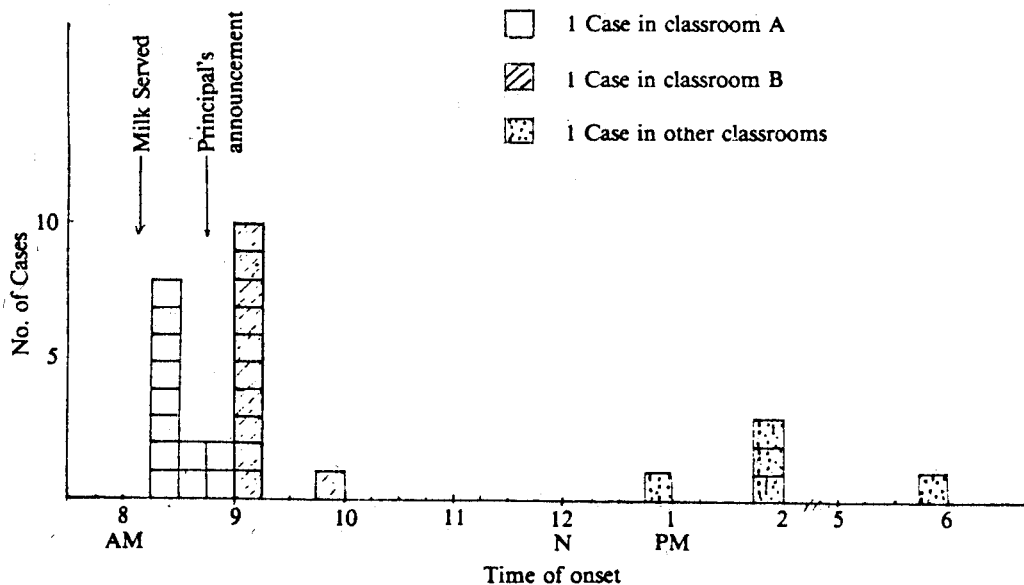
## **Outbreak of a Psychogenic Illness in an Elementary School - Tainan County**

On January 22, 1987, one day after final examinations, an outbreak of gastrointestinal symptoms occurred among students at Jen-Ai Elementary School (enrollment 2,030) in Ja-Li Township, Tainan County. The outbreak began shortly after 8:00 am when a female third grade student complained of abdominal pain and dizziness to her teacher. Within one hour, 12 (26%) of 47 students in this classroom (classroom A) developed similar symptoms (Figure 1). Since all students had been given milk from a

local dairy at 8:00 am, school officials were concerned that milk might have caused the illness. Around 8:50 am, the school principal made an announcement over the loud-speaker to inform students that the milk might be spoiled, and that any students who had not already drunk milk should not do so. By this time, however, students in all but two classrooms had already drunk the milk. Within minutes of this announcement, 10 (21%) of 48 students in another classroom (classroom B) became ill with similar symptoms. Six more cases occurred later in the day (one in classroom B, and five in other classrooms). The clustering of illness in two of 40 classrooms was highly significant (chi-square goodness-of-fit=313;  $p < 10^{-4}$  with 39 degrees-of-freedom). Among classrooms A and B, the attack rate among females was significantly higher than among males: 18 (46%) of 39 compared to 4 (7%) of 56 were ill, respectively (chi-square=17.53;  $p < 10^{-4}$ ). All ill students were sent to a nearby hospital out-patient clinic for examination. Physicians who examined these students reported no abnormal physical or laboratory findings. Rectal swabs from 20 students were negative for *Salmonella*, *Shigella*, and *Vibrio* species. Samples of milk from the same lot consumed by students were negative for *Staphylococcus aureus* and *Bacillus cereus*, in addition to the above organisms.

*Reported by the Food Sanitation Section, Tainan County Health Bureau; South Branch Laboratory of the National Institute of Preventive Medicine; the Food and Drug Laboratory Bureau, the Bureau of Food Sanitation, the Bureau of Disease Control, and the Field Epidemiology Training Program, Department of Health, Executive Yuan*

Figure 1. Onset of illness by 15 minute intervals among 28 students in Jen-Ai Elementary School, Tainan County, January 22, 1987.



**Editorial note:** This outbreak was probably due to a minor psychogenic illness unrelated to the consumption of milk. There are many similar reports of outbreaks of psychogenic illness among school children in the medical literature, including an outbreak among elementary school children in Taitung County in 1985<sup>1</sup>. Characteristic features of psychogenic outbreaks include 1) higher attack rates among females, especially in the 5-15 year age group, 2) clustering of illness in time and place, 3) short incubation period and rapid resolution of symptoms, and 4) the presence of a preceding or ongoing stressful event. These outbreaks are often initially attributed to some infectious or toxic etiology, and are frequently made worse by publicity. For this reason, it is important for school and public health officials to be aware of this phenomenon, and react calmly. An epidemiologic investigation can usually rule out infectious or toxic causes. Once affected groups are reassured there is no organic cause of illness, the outbreak usually subsides.

#### References

1 Department of Health. Outbreak of Psychogenic Illness Among Elementary School Girls in Taitung County. *Epidemiol Bull (R.O.C.)* 1985;1:57-9.

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To strengthen the surveillance system and enrich the content of the *Bulletin*, we welcome accounts of interesting cases, outbreaks, environmental hazards, or other public health problems of current interest. Articles for publication and requests to be placed on the mailing list should be sent to: the Editor, *Epidemiology Bulletin*, Bureau of Disease Control, Department of Health, the Executive Yuan, Republic of China, P. O. Box 91-103 Taipei, Taiwan, R.O.C., TEL: (02) 3962847

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