

An outbreak of type A and B botulism associated with traditional vegetable pickle in Sanandaj

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Clostridium botulinum causes severe food poisoning from botulinum neurotoxin (BoNT) production in the food (1,2). This toxin acts as a neuromuscular blocking agent, which causes paralysis (botulism) by preventing the release of neurotransmitter from motor neurons.

Botulism can present as other illnesses, and apparently unlikely foods can harbor botulinum toxin. The objective of this study was to confirm the diagnosis and determine the cause and extent of an outbreak of botulism associated with traditional vegetable pickle.

Aliquots of the food specimen were mixed with the following antitoxins: polyvalent antitoxin ABE, monovalent antitoxin A, monovalent antitoxin B, monovalent antitoxin E and buffer control (without antitoxin). Detection of all these toxins was carried out at Pasteur Institute, Tehran, Iran.

Eight persons (one family) who consumed traditional vegetable pickle were included. Their ages ranged 16 to 55 years, and 7 were female. Clinical and laboratory findings showed that the traditional vegetable pickle was associated with type A and B botulism outbreak.

The neuromuscular disease identified in eight members of a family in Sanandaj (western part of

Iran) was characteristic of an outbreak of foodborne botulism. Nevertheless, the cases in northern province of Iran were primarily attributed to fermented salmon eggs followed by home smoked salmon (3), however our findings showed type A and B botulism outbreak. The severity of disease was correlated with the type and quantity of toxin ingested (4) and it is possible to estimate the quantity ingested on the basis of the quantity detected in the leftover food eaten by the patients (5).

Most outbreaks of botulism in Iran are associated with traditional foods, especially vegetables and fish (6), however, to our knowledge, this is the first reported outbreak of botulism associated with traditional vegetable pickle and the manner in which the pickle became contaminated remains unknown but *Cl. botulinum* is a common soil organism and spores are often present on the surfaces of vegetables (7).

In conclusion, the first confirmed outbreak of type A and B botulism in Iran was recognized. Unlike most outbreaks of type E botulism, which have been associated with eating fish or other aquatic animals, this outbreak was associated with eating homemade vegetable pickle.

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