On 29 June 2006, a 65 year old woman fell ill with vomiting and diarrhoea in southern Finland. The next day she developed muscular weakness of her upper and lower limbs, and was admitted to hospital. She developed difficulty in breathing and required mechanical ventilation in an intensive care unit for one week. The patient is now recovering, but still has some difficulties in swallowing, and is not yet able to walk. The patient did not receive botulinum antitoxin, since the symptoms had already begun to resolve upon diagnosis. The patient's husband also had diarrhoea on 29 June and later had some difficulties in swallowing, but no other neurological symptoms were observed. He was admitted to hospital for one night (1-2 July) because of diarrhoea.

Serum samples from the female patient taken on 30 June and 1 July were positive for botulinum neurotoxin by mouse bioassay, and the neutralisation test suggested that the patient’s illness was caused by botulinum toxin type E. Gastric fluid and serum samples taken on 4 July did not yield neurotoxin or Clostridium botulinum. No specimens were available from the husband, as botulism was not diagnosed during his hospital stay, and he was not called back to hospital for specimens.

An interview with the husband revealed that the couple had eaten smoked vacuum-packed whitefish on 28 June. The wife had eaten most of the fish, and the husband ate only a small portion. The whitefish had been imported from Canada, but smoked and packed in Finland. There was no leftover fish for microbiological examination. Flush samples were taken from the fish’s plastic packaging, but they were negative for C. botulinum by PCR [1] and culture.

The suspected fish product was recalled by the manufacturer, and production of the product was suspended. The national and local food control authorities inspected the production plant and the distribution centre. The entire manufacturing process and storage temperatures throughout the cold chain, including the retail outlet, were investigated. The inspections did not reveal any factors that could have created an increased risk of botulinum neurotoxin production.