

Outbreaks of diarrhoea associated with butterfish in Victoria

Joy Gregory

Introduction

In the last 3 years the Department of Human Services in Victoria has recorded 3 outbreaks of gastroenteritis believed to be associated with consumption of 'butterfish'. In Victoria, escolar (*Lepidocybium flavobrunneum* and *Ruvettus pretiosus*) and rudderfish (*Centrolophus* sp.) are commonly marketed under the name 'butterfish'. True butterfish, (*Scatophagus* species) is caught as a by-catch in seine nets and traps in the shallows of northern Australia and is very unlikely to be available in any of the southern states of Australia. This short report summarises the three Victorian outbreaks.

Outbreak 1, November 1999

The first outbreak was reported in a group of approximately 80 people who attended a function at a restaurant in November 1999. The Communicable Diseases Section conducted a cohort study and interviewed 63 per cent (50/80) of guests who attended the function. Eleven attendees developed symptoms, predominantly of diarrhoea (92%), abdominal pain (92%) and nausea (50%). Vomiting was not a feature of this outbreak with only 8 per cent reporting this symptom. The diarrhoea was described as watery and there was a median incubation period of 2.5 hours after consumption of the meal. Most people recovered within 24 hours. The dinner was a set menu consisting of a choice of two entrees, two main meals and two desserts. Only one food item, crumbed and deep-fried fillets of butterfish served as a main course, had a statistically significant relative risk (RR=9.37; 95%CI 1.31–67.20). The alternate main meal grilled lamb, had a statistically significant protective association (RR 0.12; 95%CI 0.02–0.83). A sample of 'butterfish', taken from the wholesale suppliers to the restaurant, was analysed and found to be either escolar (*Ruvettus pretiosus*) or rudderfish (*Centrolophus* sp.).

Outbreak 2, November 1999

The second outbreak was reported in a group of 15 people who attended a restaurant also in November 1999. Interviews with this group were unable to be completed but it is known that 10 persons reported symptoms, predominantly of diarrhoea described by one case as yellow oily diarrhoea, after consumption of grilled 'butterfish' which was the common food consumed by all cases. A sample of left-over butterfish from the restaurant was obtained and was found to be either escolar (*Ruvettus pretiosus*) or rudderfish (*Centrolophus* sp.).

Outbreak 3, August 2001

A third outbreak reported in August 2001 affected five out of a group of 15 work colleagues who attended a restaurant for a lunch meal. Four cases consumed 'butterfish' and experienced symptoms of diarrhoea and nausea within 2 hours of consumption. Statistical analysis was not carried out as too few people were interviewed. Leftover fish sampled from the restaurant was analysed and found to be escolar (*Ruvettus pretiosus*).

Discussion

Prior to these outbreaks, there had been no gastrointestinal outbreaks associated with 'butterfish' recorded in Victoria. Investigation of the 3 Victorian outbreaks revealed that the chefs of the restaurants where the outbreaks occurred were unaware of the purgative properties of escolar and rudderfish. In addition, receipts retained by the restaurants indicated that 'butterfish' was purchased so the chefs were also not aware of the correct species that had been purchased on these occasions. The purgative properties of escolar and rudderfish have been documented in literature^{1,2,3,4} but outbreaks may be poorly recorded.

References

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3. Seafood Services Victoria Inc. What is butterfish, what is escolar, what is rudderfish? Information sheet.
4. Harlow J. Gourmet treat or Olestra in fish costume? *San Francisco Examiner* 2 June 1999.