
OUTBREAK

Human salmonellosis and peanut butter

Victoria: Sally Ng¹, Graham Rouch¹, Rodney Dedman¹, Bronwen Harries², Andrew Boyden³, Lyn McLennan¹, Sheila Beaton¹, Agnes Tan³, Selenia Heaton³, Dianne Lightfoot³, Mary Vulcanis³, Geoff Hogg³.

South Australia: Wendy Scheil^{4,5}, Scott Cameron⁴, Martyn Kirk^{4,5}, Jenny Feldheim⁴, Rosalind Holland⁴, Chris Murray⁶, Nick Rose⁷, Phil Eckert⁷.

To date this year 36 cases of salmonellosis caused by *Salmonella* Mbandaka have been reported in Victoria and 18 cases in South Australia. Cases were identified between 24 February and 24 June 1996. This outbreak has been linked to peanut butter contaminated with *Salmonella* Mbandaka.

Salmonella Mbandaka, a type C1 serovar, is a relatively uncommon cause of gastroenteritis in Australia. Up until 1993, locally acquired *S. Mbandaka* was rare, with four to 17 cases per year reported Australia wide. From 1994, the number of cases of salmonellosis attributed to this serovar had increased and by 1995, there were 88 cases reported to the National Salmonella Surveillance Scheme (NSSS), comprising several clusters in Sydney and Canberra¹. This increased incidence was, however, not observed in Victoria. South Australia recorded nine cases in 1995 and one in 1994, Victoria recorded nine cases in 1995 and four in 1994.

In April 1996, State-based laboratory surveillance systems to monitor *Salmonella* species alerted authorities to an apparent outbreak of *S. Mbandaka*. Having noted the clustering of *S. Mbandaka* cases in Victoria and South Australia, public health authorities initiated an investigation.

Victoria reported 36 cases with isolation dates between 5 March 1996 and 20 June 1996. South Australia reported 18 cases with isolation dates between 4 April and 24 June 1996. Over the same time period New South Wales reported only three cases and no activity was reported from other States.

Food histories together with information (from NSSS) of *S. Mbandaka* in food, both past and recent, were reviewed. These suggested chicken as a possible source of the bacterium but these suspicions were not confirmed by laboratory tests. South Australia and Victoria instituted a combined approach to discover a possible cause, under the auspices of the Communicable Diseases Network Australia New Zealand (CDNANZ). Extensive food histories were collected to generate hypotheses about possible food or animal sources of the

organism. Initial interviews suggested that generic brands of peanut butter were frequently consumed by cases.

On 20 June 1996, *Salmonella* C1 was identified in two open jars from the same brand of peanut butter in Victoria. The recall, initiated on 23 June 1996, was based on ELISA tests on unopened samples of peanut butter held by the company. Results of testing by Australian Standard microbiological methods were only available the following day, on 24 June 1996.

S. Senftenberg was also isolated during subsequent testing of peanut butter. This serovar is rarely observed as a cause of human disease in Australia. Five cases were reported in Victoria between January and June 1996 compared with two per year in 1994 and 1995. There has been one recent case in South Australia possibly attributed to the consumption of peanut butter.

Investigations into the source of the contamination are continuing.

1. National Salmonella Surveillance Scheme (NSSS) human fourth quarter report 1995. Issue no. 3/96 Melbourne: Microbiological Diagnostic Unit, University of Melbourne.

1. Infectious Diseases Unit, Department of Human Services, 115 Victoria Parade, Fitzroy, Vic. 3068
2. Food and Water Unit, Department of Human Services, Vic
3. Microbiological Diagnostic Unit, University of Melbourne, Vic
4. Communicable Disease Control Branch, South Australian Health Commission, PO Box 6, Rundle Mall, Adelaide SA 5000
5. National Centre for Epidemiology and Population Health, Canberra, ACT
6. Institute of Medical and Veterinary Science, Adelaide, SA
7. Food Unit, South Australian Health Commission, Adelaide, SA