

## ***Garlic as a possible vehicle for Salmonella Virchow***

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Between September 1997 and May 1998, a sustained increase in laboratory notifications of *Salmonella* Virchow was noted in New South Wales, Victoria and South Australia. We commenced a case control study to investigate this increase. Cases were defined as individuals with culture confirmed *S. Virchow* infection and diarrhoeal disease.

A questionnaire was administered to cases and controls by telephone. Controls were selected by progressive digit dialling based on case telephone numbers. Samples of commercially available products were cultured for *Salmonella*. Phage typing and pulse field gel electrophoresis (PFGE) were performed for case and environmental isolates.

Fifty-four cases participated in the study; nineteen (37%) reported bloody diarrhoea and *S. Virchow* was isolated from blood in four (8%). Fourteen (28%) cases were admitted to hospital and one died. The predominant phage type was PT8 (63%) and fresh garlic (OR=7.2, 95% CI 1.3-18) and two brands of semi-dried tomatoes (OR=49.0, CI 1.6-572) were associated with these cases.

Chinese garlic from a single distributor was used in the semi-dried tomato production. *S. Virchow* (PT8) was cultured from open packages of semi-dried tomatoes in two States from the two separate producers. This is the first report of garlic as a vehicle for *Salmonella*. It is probable that *S. Virchow* was introduced into semi-dried tomatoes and other lightly cooked or raw foods consumed by cases through cross-contamination from fresh garlic. Rapid globalisation of food production and markets requires strategies to prevent contamination of food from farm to table. Further studies are required to investigate the mode of garlic contamination.