

### ***Non-invasive listeriosis outbreak associated with potato-ham bake consumption***

In January 1998, an outbreak of non-invasive listeriosis among persons who attended a wedding was reported to the Hunter Public Health Unit. The source of the outbreak was determined to be ham used in a potato bake that was described by the guests as tasting unusual. *Listeria* isolates from patients and from ham isolates from the same manufacturer as the wedding ham/potato bake were indistinguishable by both pulsed-field gel electrophoresis (PFGE) and random amplified polymorphic DNA analysis (RAPD). The outbreak led to Hunter Public Health Unit publication of "Guidelines for controlling *Listeria* bacteria in foods prepared by caterers for at-risk consumers."

### ***The First Australian Outbreak of Non-invasive Listeriosis***

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#### **Background:**

In January 1998, an outbreak of flu-like illness with gastroenteritis occurred among persons who attended a wedding in the Hunter Valley. An investigation was undertaken to confirm the cause of the outbreak, describe the clinical features, and risk factors for illness and identify related cases.

#### **Methods:**

Wedding attendees were interviewed about foods consumed and symptoms experienced. Stool samples were cultured for *Campylobacter* sp., *Salmonella* sp., *Shigella* sp. and *Listeria monocytogenes*. Sera was tested for anti-listeriolysin IgG antibody by ELISA.

#### **Results:**

Twenty three persons met the case definition for illness. *L. monocytogenes*, was cultured from the stool of 10 of 11 ill persons tested. The most common symptoms reported were fatigue (81%), loose stools (68%), headache (67%), myalgia (62%), abdominal cramps (60%), fever (55%) and lymphadenopathy (42%). No patients were hospitalized or died. The median incubation period was 29 hours (range 8 to 62 hours). Due to the fixed menu, no single food had an elevated relative risk. However, *Listeria monocytogenes* was cultured from ham from the same manufacturer that was used in a potato bake that was described as tasting unusual. Isolates from stool specimens from all 10 patients from the wedding and the isolate from ham from the same manufacturer as was used in the potato bake were indistinguishable by pulse field gel electrophoresis (PFGE) and random amplified polymorphic DNA (RAPD) analysis. Quantification of *Listeria monocytogenes* levels on the ham at the wholesaler and the environmental investigation indicate that temperature abuse during preparation of the potato bake probably resulted in a high inoculum of *Listeria* at the wedding.

#### **Conclusions:**

This episode suggests that outbreaks of non-invasive listeriosis be more common than is recognised. *Listeria* should be suspected in foodborne outbreaks with incubation periods of approximately 24 hours that are characterised by severe systemic symptoms with mild to moderate diarrhoea. *L. monocytogenes* may be an under-recognized cause of febrile gastroenteritis.