



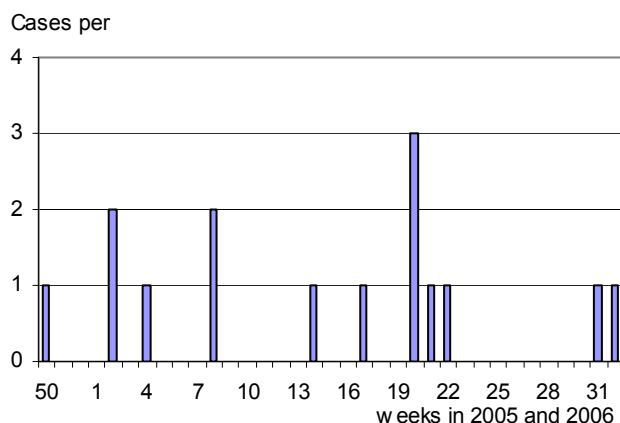
A cluster of *Salmonella*-infections in Sweden

Between December 2005 and August 2006, 15 cases of *Salmonella*-infection were reported to the Swedish health authorities, which were all caused by *S. Enteritidis* phage type NST 3+. This phage type had been isolated from patients in Sweden only four times earlier, all from sporadic cases. On 22 February an Enter-net warning was sent to several countries. This phage type had not been isolated by any of the countries. However earlier, in the winter of 2000 – 2001, an outbreak caused by *S. Enteritidis* of the same phage type, had occurred in Canada and the US. That outbreak had been caused by contaminated almonds produced in the US (see: MMWR, 2004, 53/22, 484-487).

Based on this information, a patient/control study was started among 12 patients and 3 control persons per patient.

Results. The 15 patients lived in central and southern regions of Sweden. Their age varied from 11 – 87 year with a mean of 46 year. Eleven patients were women. The patients fell ill between 15 December 2005 and 10 August 2006 (see figure 1).

Figure 1. Incidence of *S. Enteritidis* infections between December 2005 and August 2006



The patient/control study revealed that 10 out of 12 patients (83%) had eaten almonds in the two weeks prior to infection, while the other two patients could not remember if they had eaten almonds. On the other hand only 6 out of 34 control persons (18%) had eaten almonds. This implies that the infection was associated with the consumption of almonds with a statistical significance of > 99%. In addition, no association with any other food product was observed. Consequently 22 samples of almonds were analysed for *S. Enteritidis*, however none of the samples was positive for *S. Enteritidis*.

Conclusion. Contaminated almonds most probably caused this cluster of *Salmonella*-infections. Because the phage type was identical to that of strains which earlier caused an outbreak in the US and Canada, it can be assumed that almonds imported from the US were the cause of this cluster of infections.

Source:

Eurosurveillance monthly releases 2007, vol. 12/ issue 6

Editorial note: To prevent contamination of almonds with *Salmonella*-organisms, the 'US Department of Agriculture' has issued hygiene rules which are taken up in the Federal Register 2006; 71:234 have been published on Internet page:

http://thefederalregister.com/b.p/agency/Agricultural_Marketing_Services/