

Rapid communications

VEROCYTOTOXIN-PRODUCING *ESCHERICHIA COLI* O157 OUTBREAK IN WREXHAM, NORTH WALES, JULY 2009

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An outbreak of *Escherichia coli* O157 involving four people in North Wales is currently being investigated. Laboratory typing shows all the isolates belong to phage type 2. All four cases reported eating different products from a fast food outlet in the area. The possibility of other common exposures is being explored.

The National Public Health Service for Wales (NPHS) and Environmental Health Officers from Wrexham County Borough Council (WCBC) are currently investigating four cases of verocytotoxin-producing *Escherichia coli* O157 (VTEC O157) in the Wrexham area.

The cases are all females, aged 3, 23, 32 and 32 years. Case 1 had an onset date of 20 July and was reported to the NPHS on 22 July after a positive stool sample result. She later developed haemolytic uraemic syndrome and thrombocytopenic purpura and was admitted to hospital on 28 July. She is currently receiving renal dialysis and ongoing plasmapheresis. Case 2 had an onset date of 21 July and was reported to the NPHS on 24 July. She is recovering at home. Case 3 and 4 are a mother and daughter, both with onset of symptoms on 21 July. The child was admitted to hospital on 27 July with haemolytic uraemic syndrome and required dialysis for five days. She has now been discharged. Samples were taken from mother and child at the hospital, and the results were reported to the NPHS on 30 July. All four cases reported eating different products (chicken, beef and vegetarian burgers) from a fast food outlet in the area in the week before becoming unwell. The possibility that the cases have links involving other common exposures is still being explored.

Faecal samples from all the cases were confirmed as positive for *E. coli* O157. Confirmation and typing at the Laboratory of Gastrointestinal Pathogens (LGP) at the Health Protection Agency in London have shown them all to belong to phage type (PT) 2 and to possess genes encoding verocytotoxin VT2. The isolates were indistinguishable from each other by pulsed field gel electrophoresis (PFGE) of XbaI fragments. Variable number tandem repeat typing showed that they had the same profile that was not found in other isolates of PT2 from 2009 tested so far.

The food outlet was visited by Environmental Health Officers from WCBC on 30 July. Several problems were identified, such as poor food handling techniques, lack of hand washing equipment, no evidence of food hygiene training for staff and no food safety management system in place. As a precaution the outlet is

currently the subject of a Hygiene Emergency Prohibition Order, and is closed until further notice. This means that the owners have to demonstrate that systems are in place to correct the deficiencies identified and satisfy the Environmental Health Officers that food handling practices will change before reopening. Food and environmental samples were taken from the food outlet for laboratory investigations. Results are pending.

Active case finding has been pursued using local general practitioners, but there have been no further cases reported to date.

VTEC O157 PT2 strains may be associated with the development of serious illness. They have represented around 10% of isolates in England and Wales since 2005, compared with the most prevalent type, PT21/28, that accounted for up to 40% of reports [1,2].

Twenty four isolates of VTEC O157 were confirmed from Welsh laboratories in 2009 up until 3 August. Prior to the cases reported here, there were only two sporadic infections with PT2 (in mid-March) and neither was from North Wales. Food or animal sources were not investigated for these unlinked cases.

References

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