Shigellosis

Epidemiology in New Zealand

Outbreaks of shigellosis in New Zealand are often caused by person-to-person transmission. Many cases of shigellosis are the result of overseas travel, but occasional outbreaks occur.

More detailed epidemiological information is available on the Institute of Environmental Science and Research (ESR) surveillance website at www.surv.esr.cri.nz.

Further information on foodborne illness is available at www.foodsafety.govt.nz and www.mpi.govt.nz.

Case definition

Clinical description

Acute diarrhoea with fever, abdominal cramps, blood or mucus in the stools and a high secondary attack rate among contacts.

Laboratory test for diagnosis

Laboratory confirmation requires isolation of any *Shigella* spp. from a stool sample or rectal swab and confirmation of genus.

All isolates should be referred to the Enteric Reference Laboratory at ESR for further characterisation.

Case classification

- **Under investigation:** A case that has been notified, but information is not yet available to classify it as probable or confirmed.

- **Probable:** A clinically compatible illness that is either epidemiologically linked to a confirmed case or has had contact with the same common source – that is, is part of a common-source outbreak.

- **Confirmed:** A clinically compatible illness that is laboratory confirmed.

- **Not a case:** A case that has been investigated and subsequently found not to meet the case definition.
Spread of infection

Incubation period
Range of 12 hours to 1 week; usually 1–3 days.

Mode of transmission
Direct or indirect faecal-oral transmission. Food or water may become contaminated. The infective dose can be as low as 10–100 organisms.

Period of communicability
Up to 4 weeks after infection. Asymptomatic carriage may also occur. Faecal shedding rarely persists for months. Appropriate antimicrobial treatment reduces the duration of carriage to a few days.

Notification procedure
Attending medical practitioners or laboratories must immediately notify the local medical officer of health of suspected cases. Notification should not await confirmation.

Management of case

Investigation
Obtain a history of travel, including a food history and water exposure, as well as a list of possible contacts. Ensure laboratory confirmation by stool or rectal swab culture has been attempted.

Restriction
In a health care facility, only standard precautions are indicated in most cases; if the case is diapered or incontinent, apply contact precautions for the duration of illness. For further details, refer to the exclusion and clearance criteria in Appendix 2: Enteric Disease.

Counselling
Advise the case and their caregivers of the nature of the infection and its mode of transmission. Educate about hand and food hygiene.
Management of contacts

Identify contacts for investigation and counselling as appropriate.

Definition

All those with close (for example, household) contact with a case during their illness or the subsequent period of communicability or who have been exposed to the same contaminated food or water in a common-source outbreak.

Investigation

All close (for example, household) contacts in one of the high-risk groups (1–4, see the exclusion and clearance criteria in Appendix 2: Enteric Disease) should be asked to provide clearance of one negative faecal sample.

Restriction

Nil, unless symptomatic.

Prophylaxis

Nil.

Counselling

Advise all contacts of the incubation period and typical symptoms of shigellosis, and to seek early medical attention if symptoms develop.

Other control measures

Identification of source

Check for other cases in the community. Investigate potential food or water sources of infection only if there is a cluster of cases or an apparent epidemiological link.

If indicated, check the water supply for microbiological contamination and compliance with the latest New Zealand drinking-water standards (Ministry of Health 2008).

Disinfection

Clean and disinfect surfaces and articles soiled with stools. For further details, refer to Appendix 1: Disinfection.
Health education
In an outbreak, consider a media release and direct communication with local parents, early childhood services, schools and health professionals to encourage prompt reporting of symptoms. In communications with doctors, include recommendations regarding diagnosis, treatment and infection control.

In early childhood services or other institutional situations, ensure satisfactory facilities and practices regarding hand cleaning; nappy changing; toilet use and toilet training; preparation and handling of food; and cleaning of sleeping areas, toys and other surfaces.

Educate the public about safe food preparation (see Appendix 3: Patient Information).

Reporting
Ensure complete case information is entered into EpiSurv.

Liaise with the environmental health officer of the local territorial authority where food premises are thought to be involved. Liaise with the Ministry for Primary Industries if a contaminated commercial food source is thought to be involved.

If a cluster of cases occurs, contact the Ministry of Health Communicable Diseases Team and outbreak liaison staff at ESR, and complete the Outbreak Report Form.

References and further information