Tetanus

Epidemiology in New Zealand

There has been a median of two cases of tetanus per year since routine infant vaccination against tetanus was begun in New Zealand in 1960. The last death attributed to tetanus occurred in 2007.

Most reported cases follow traumatic wounds in elderly people who have either never received tetanus vaccination or have waning immunity from tetanus vaccination.

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

Case definition

Clinical description

Most commonly presents with gradual onset of muscular rigidity and painful spasms, starting in the jaw (lockjaw, trismus) then spreading to the neck, trunk and extremities. Tetanus may cause laryngeal spasms, respiratory failure and autonomic dysfunction (fluctuations in pulse and blood pressure), leading to death, even with modern intensive care.

In less than 20 percent of cases, muscle rigidity and spasms are limited to a confined area close to the site of injury.

Laboratory test for diagnosis

Isolation of Clostridium tetani from culture of the wound site supports the diagnosis but yield is poor, and a negative culture does not rule out tetanus. In general, laboratories have a reduced role in the diagnosis of tetanus.

Case classification

- **Under investigation**: A case that has been notified, but information is not yet available to classify it as confirmed.
- **Probable**: Not applicable.
- **Confirmed**: A clinically compatible illness, as diagnosed by a medical practitioner.
- **Not a case**: A case that has been investigated and subsequently found not to meet the case definition.
Spread of infection

Incubation period
Usually 3–21 days, although may range from 1 day to several months, depending on the character, extent and location of the wound.

Mode of transmission
The disease is not directly transmitted from person to person.

Tetanus spores are usually introduced into the body through a wound contaminated with soil, street dust or animal or human faeces. Implicated wounds are often necrotic and most often a result of puncture injury but may include lacerations, splinters, grazes, burns, chronic ulcers and even surgical wounds. Some cases do not recall a wound. Neonatal tetanus usually follows infection of the umbilical stump. Intravenous drug users may be infected from contaminated drugs.

Period of communicability
Tetanus spores remain viable for many years in the environment.

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
Ascertain whether there is a history of vaccination, recent injury or intravenous drug use. Culture of swab or tissue sample from the wound may be attempted but *C. tetani* is not often recovered.

Restriction
Nil.

Treatment
All cases should be under the care of a physician or paediatrician in a centre with intensive care facilities. Advice should be sought from an infectious diseases physician.
Counselling
Advise the case and their caregivers of the nature of the infection, its mode of transmission and the role of immunisation.

Management of contacts
Not applicable.

Other control measures

Identification of source
Nil.

Restriction
Nil.

Disinfection
Nil.

Health education
Medical officers of health are responsible for health education.