Kuru Fact Sheet

Kuru is an incurable degenerative neurological disorder caused an infectious protein (prion) found in contaminated brain tissue. Kuru originated from ritualistic cannibalism in the Fore tribe of Papua New Guinea. Kuru is closely related to Creutzfeldt-Jakob disease that also affects humans and a similar disease that appears in cows known as bovine spongiform encephalophathy also known as Mad Cow Disease.

General Information

Characteristics

Prions are infectious proteins that cause transmissible spongiform encephalopathy (TSE) in humans and animals. It is characterized by irregular folding of regular proteins within a host. Prions are highly resistant to heat, ultraviolet light, radiation, and routine disinfection. Human TSEs may have infectious, sporadic, or genetic origins, but the brain tissues from affected individuals always contain prions that are capable of transmitting the disease (as demonstrated in laboratory animals). The asymptomatic incubation period for Kuru is 5-20 years, and the clinical stage lasts an average of 3-12 months.

Clinical manifestations

Kuru is an incurable infection that causes irreversible brain and nervous system changes that ultimately lead to death. It is characterized by headaches, joint pains, shaking of the limbs, slurred speech and loss of coordination. Trembling one of the characteristic symptoms of those infected with this form of transmissible spongiform encephalopathy; the term “kuru” is derived from the Fore word meaning “to shake”. Secondary symptoms include outbursts of laughter, depression and mental degeneration.

Epidemiology of transmission

Kuru is spread by consumption of contaminated material. Kuru is believed to originate from the ritualistic consumption of the tissue (including brain) of deceased family members within the Fore tribe, of Papua New Guinea. Kuru is the only epidemic of human prion disease in known human history.

Basic Prevention

There are currently no cures for individuals infected with Kuru, along with any other TSE. In the case of the Fore, the only effective prevention method was to stop the cannibalism practices. Since government intervention in the 1950’s, as a result of the Kuru epidemic, infection declined significantly, and is rarely, if ever diagnosed today.

Infection Prevention and Control Measures

Healthcare Prevention Measures

Routine / Standard Precautions, should be implemented with patients who are suspected or confirmed to have Kuru.

- Utilize universal precautions when handling specimes i.e. blood, spinal fluid.
- Use disposable equipment where possible: liquid repellent gowns, mask, gloves, or goggles.

Environmental control measures

There is no scientific evidence of transmission of prions from touching environmental surfaces; however, exposure to the brain and spinal tissue from infected patients should be avoided. In the event of an environmental contamination consult the institution’s IPAC team for recommendations on how to safely clean and disinfect the locations affected.

IPTS
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