What is Creutzfeldt-Jakob disease?

Prions are infectious agents that attack the central nervous system and then invade the brain, causing dementia. The best-known prion disease is Creutzfeldt-Jakob disease or CJD. This information sheet provides an overview of the symptoms and different types of CJD.

Creutzfeldt-Jakob disease (CJD)

Creutzfeldt-Jakob disease was first reported by two German doctors (Creutzfeldt and Jakob) in 1920.

What are the symptoms of CJD?

- Early symptoms include minor lapses of memory, mood changes and loss of interest.

- Within weeks an infected person may complain of clumsiness and feeling muddled, become unsteady in walking and exhibit slow or slurred speech.

- The disease progresses to jerky movements, shakiness, stiffness of limbs, incontinence and the loss of the ability to move or speak. It is likely that the person is no longer aware of their surroundings or disabili-

- Eventually they will need full nursing care.
There is no evidence that someone with CJD is in pain, provided they are well nursed and comfortable. Drugs can alleviate symptoms such as shakiness.

Types of CJD
There are four forms of CJD: sporadic, familial, latrogenic and variant.

Sporadic CJD
The cause of sporadic CJD (also called classical CJD) remains unknown, but the disease mainly affects those over 50. Sporadic CJD is marked by rapid onset of dementia. The course of the disease is usually measured in months.

Familial CJD
This is an inherited form of CJD. Those affected appear to be genetically predisposed to produce the abnormal form of prion proteins. People usually develop familial CJD at an earlier age than the sporadic form and the course of the illness is usually longer.

Latrogenic CJD
This form of CJD arises from contamination with tissue from an infected person, usually as a result of a medical procedure such as corneal transplants, grafts or the use of growth hormone. A few people have been infected through the use of neurosurgical instruments.

Today, no transplants are taken from infected people, growth hormone is made artificially and surgical instruments used on people with CJD are never used on other patients.

Variant CJD and the link with BSE
In 1996 a new type of CJD, variant CJD, was reported. Variant CJD appears to affect younger people than the other forms of the disease.

The average age of death is 29 years. (However, one case of a 74 year old man with variant CJD has been reported.)
There is now evidence that variant CJD is caused by bovine spongiform encephalopathy (BSE) a form of prion disease affecting cattle.

Prion diseases have been found in several other animal species, including sheep (scrapie), deer, cats, mink and zoo animals. The consumption of infected beef products appears to have led to the development of BSE in humans.

Since 1989 action has been taken to remove those parts of the cattle where the greatest concentrations of infective agent are found, including brains and spinal cords, from the human food chain.

While there has recently been an increase in the number of reported cases of variant CJD, there is currently no firm scientific basis for predicting the future numbers of cases. One problem is that the length of the incubation period for the disease remains uncertain. Prions may exist in the body for many years before symptoms begin.
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