QUICK LINKS

Bovine Spongiform Encephalopathy and VCJD—TRAVELER INFORMATION
• Introduction • Mode of Transmission • Variant Creutzfeldt-Jakob Disease
• Risk Factors • Prevention Strategies

Traveler Information

BOVINE SPONGIFORM ENCEPHALOPATHY AND VCJD

INTRODUCTION

Bovine spongiform encephalopathy (BSE), known also as "mad cow disease," is a fatal neurological disease of cattle. The agent that causes BSE in cattle can cross over into humans, causing a disease called variant Creutzfeldt-Jakob disease (vCJD).

BSE first appeared in cattle in the United Kingdom in 1986. The disease originated when the causative agent of scrapie (a disease of sheep and goats) entered cattle feed. Cattle ate the infected feed and were slaughtered, with the infected beef byproducts reentering cattle feed and causing additional bovine BSE cases. Stricter regulations eventually brought the BSE epidemic under control in the U.K. Very few BSE cases have occurred in animals born in the U.K. since the introduction of the ban on meat and bone meal in 1988, and virtually none in animals born since 2000. At the same time that BSE started to decline in the U.K., however, it began to appear in other European countries. Stricter regulations were adopted by other European Union countries in 2001.

While countries in the EU have regulations in place to try to stop the spread of the disease, it is not clear that there is always uniformly adequate enforcement or surveillance; thus, the true extent of the BSE problem is not known.

BSE in cattle has occurred in Austria, Belgium, Canada, the Czech Republic, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Japan, Liechtenstein, Luxembourg, the Netherlands, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, the U.K., and the U.S. Imported cases have been found in Canada, Denmark, Germany, France, Ireland, Italy, Portugal, Slovenia, the Falkland Islands, Oman, and the U.S.

MODE OF TRANSMISSION

There have been no known cases of direct human-to-human transmission, but the disease may be transmitted through blood transfusion and, theoretically, organ transplantation, assisted reproduction technologies, and the reuse of surgical instruments, endoscopes, and vascular catheters, which are now subject to strict cleaning and sterilization procedures. Humans likely acquire vCJD from eating beef that is contaminated with nervous tissue during the slaughtering process.

VARIANT CREUTZFELDT-JAKOB DISEASE

Variant CJD is a fatal neurodegenerative disease of humans; it usually begins at a relatively young age (median age 29 years), and the duration of the illness is relatively long (median duration 14 months). Psychiatric or sensory symptoms may occur early, followed later by neurological abnormalities. The disease is invariably fatal. The course of the epidemic of human vCJD is unpredictable, largely because the incubation period is unknown and may depend on several genetic factors.

As of June 2014, human cases of vCJD have occurred in: the U.K. (177), France (27), Ireland (4), Italy (2), the U.S. (4), Canada (2), Saudi Arabia (1), Japan (1), the Netherlands (3), Portugal (2), Spain (5), and Taiwan (1).

RISK FACTORS

The current risk of acquiring vCJD from eating beef (muscle meat) and beef products in countries with BSE in cattle cannot be determined precisely. The risk of acquiring vCJD from blood transfusion has been minimized but not eliminated in the U.K. Most surgical operations are likely to be safe, but some delicate instruments cannot tolerate the sterilization regimen, and tissue transplantation could also present a risk

PREVENTION STRATEGIES

Prevention strategies for travelers to countries with known cases of BSE:

- Travelers who want to eliminate any risk should avoid eating all beef and beef products. Milk and milk products do not pose a risk for vCJD.
- While routine operations are likely to be safe, organ transplantation might pose a risk and should be avoided.
- Avoid blood transfusions except in emergency situations.
- Individuals who may need blood transfusions, other blood products, or surgery during travel in these countries should discuss these issues with a physician before departure.

Some countries, including the U.S., have restrictions on who can donate blood and organs, based on whether the person has traveled or lived in countries with BSE and the amount of time spent there. Those who have transited or lived in countries with BSE cases should inform a nurse or doctor.
