Transmission of vCJD Case Study

In the 1980s, cows in Great Britain started dying of a strange disease that turned their brains into mush. The disease, called *bovine spongiform encephalopathy* (the “spongiform” refers to the spongelike nature of the diseased brain) or BSE, is more commonly known as mad cow disease. Since that time, at least 180,000 cows have been diagnosed with the condition, and billions more have been slaughtered as a preventive measure. In the 1990s, some humans in Britain contracted the human form of the disease (called variant Creutzfeldt-Jakob disease, or vCJD) from eating beef from diseased cows, although this number turned out to be much lower than originally predicted.

While transmission of vCJD from one human to another has been documented, until recently these cases were the result of implantation of contaminated corneal grafts; the use of contaminated human growth hormone; or, notably, the use of surgical instruments contaminated from previous neurosurgical procedures on vCJD-infected patients. The situation changed dramatically in 2003, when Britain reported the first case of vCJD transmitted by a blood transfusion. As of early 2007, a total of 66 people in the United Kingdom were known to have received blood from donors who later developed vCJD. Three of these people now have been confirmed to have vCJD.

Variant Creutzfeldt-Jakob disease is invariably fatal; there are no effective treatments for it.

Because of this, it is considered controversial to test people for the disease since no hope of recovery can be offered to them. For that reason, of the 66 people known to have received blood from infected donors, only eight have been tested for vCJD (34 have already died from other causes). Of these, three have tested positive.

* *What does it say about the disease agent if “sterilized” surgical instruments have transmitted it?*
* *The infection did not appear to be highly transmissible via contaminated beef products. Can we say the same about transmission via contaminated human blood?*