Britain buys US plasma company due to continued vCJD threat

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The extraordinary measures taken by the British government to obtain supplies of blood plasma underscores the continued threat of variant Creutzfeldt-Jakob Disease (vCJD), the brain wasting disease resulting from eating meat from cattle infected with Bovine Spongiform Encephalopathy (BSE or Mad Cow Disease).

On December 17 the British Department of Health purchased an American blood plasma supply company called Life Resources for around £50 million. The British government is also expected to pay out a further £21 million over the next four years depending on the company's performance. Britain has relied on overseas plasma since 1998, when a ban was introduced on the production of plasma from blood collected in Britain because of a fear that donors may have vCJD.

US blood collection companies are being bought up by private suppliers, so the British government made this purchase to guarantee security of future supplies. Life Resources consists of 27 affiliated companies that collect blood from 24 centres in America. The United States is the only country able to supply plasma in the quantities needed by Britain's National Health Service. There have been no reported cases of vCJD there.

Life Resources will supply nearly half of Britain's blood plasma needs. Plasma is used in the treatment of tens of thousands of patients to make blood clotting agents, albumin, immunoglobulin and Factor 8. Albumin is used in the treatment for burns, shock and major trauma. Intravenous immunoglobulin is given to patients with immune disorders and Factor 8 is used to treat haemophiliacs.

The government's willingness to spend such a sum of money contradicts official attempts to play down the threat from vCJD, which remains incurable and affects mainly young people. A report by the National vCJD Surveillance Unit in Edinburgh, published in July this year, said it expected numbers of cases will be "very small" although it admitted that estimated cases of vCJD would increase by around 20 percent each year. The very long incubation period for the disease means that its eventual impact is difficult to assess. The unit gives the probable number of people to have died from vCJD to be 119, with 10 people diagnosed and still alive.

A recent survey based on examination of tonsils and appendices removed from patients between 1995 and 1999 predicts that about 7,000 people "could be at high risk" of developing vCJD. This figure is considerably lower than previous estimates of a worst-case scenario of between 50,000 and 100,000 people developing the disease by 2080. Experts suggested that there was a wide margin of error involved in the survey and recommended larger scale studies. No blood test for the disease has yet been developed so that only examination of organs for the presence of prions—the mutated protein that causes the disease—can be used to detect vCJD.

Fears that vCJD could be transmitted through blood were heightened by a report of tests on animals carried out at the UK's Institute of Animal Health earlier this year. They showed that one in six animals given blood from infected sheep appeared to develop the illness. Previous experiments have only showed transmission to animals fed with infected brain.

In a separate development, two families this month won a High Court hearing for an unproven drug to be given to their teenage children who are infected with vCJD. The court decision gives the go ahead for 18-year-old Jonathan Simms from Belfast and a 15-year-old girl to be given the drug pentosan polysulphate. Due to the drug's large sized molecules it

cannot be administered via the bloodstream but must be injected directly into the brain.

Jonathan's father, Don Simms, has carried out a desperate search for treatment for his son since learning of the diagnosis. He learnt about the drug pentosan polysulphate by searching on the Internet. The families local hospital refused to try it on his son, so Don Simms hired an air ambulance to take Jonathon to Germany where he had found a hospital willing to carry out the treatment. Just as they were preparing to make the journey, the German hospital pulled out. Don Simms then made appeals to the British government to allocate a hospital for the treatment, but was turned down. Only after taking the issue to the High Court was he able to gain permission for the treatment to go ahead.

Pentosan polysulphate was originally developed as a drug to treat bowel and bladder inflammation. Dr Stephen Dealler has promoted its use in the treatment of vCJD over several years, although he has no connection with these cases. Dealler is a medical microbiologist at Lancaster Royal Infirmary. Along with Professor Richard Lacey he campaigned publicly against the then Conservative government's handling of the BSE crisis in Britain. It took ten years after the BSE epidemic in cattle began in 1986 for the government to admit it could cross the species barrier to infect humans. It finally began a cull of all cows over the age of 30 months in an attempt to stop the disease spreading.

Simms told the BBC, "The animal studies that have been carried out with this particular compound has given those animals up to 40 percent extension of life and who knows, with medical science as rapid as it is, what may be around the corner. If it were the case Jonathan died out of this, his death will not have been in vain."