



## **EIGHTY-SEVENTH MEETING OF THE SPONGIFORM ENCEPHALOPATHY ADVISORY COMMITTEE**

The Spongiform Encephalopathy Advisory Committee held its 87<sup>th</sup> meeting in London on 21<sup>st</sup> April 2005, when it discussed the following matters:

### **CURRENT ISSUES**

SEAC was updated on the following current issues:

- A request from the National Blood Transfusion Service for SEAC advice on the use of prion reduction filters for blood. The committee strongly recommended that such products should be independently validated.
- The SEAC Epidemiology Subgroup would meet in May to discuss the issues related to the predicted profile of the vCJD epidemic identified by SEAC at its last meeting.
- A collaboration between the MRC Prion Unit and GlaxoSmithKline to develop prion disease therapies had been recently announced.
- France is to increase its surveillance of TSEs in goats.
- The recent case of probable iatrogenic CJD related to a certain type of dura mater graft that was performed in 1987. The committee noted that the TSE related risks associated with this procedure were now well known and that such grafts no longer take place in the UK.
- A number of SEAC members had looked at a submission hypothesising that toxic alkaloids in ryegrass may have been

a contributing factor in the BSE epidemic. The members had agreed that the evidence put forward in support of this hypothesis was not sufficiently rigorous or compelling to warrant a full discussion. Furthermore, the evidence that contaminated meat and bone meal was the primary cause of BSE epidemic remains strong.

## **EARLY PHASE OF vCJD INFECTION IN BLOOD TRANSFUSION RECIPIENTS**

The Committee on Microbiological Safety of Blood, Tissue and Organs (MSBTO) asked SEAC for advice on whether a scientific distinction could be drawn between potential tissue/organ donors that have received blood transfusions either a few days before donation or in the more distant past, in terms of the relative load of vCJD agent that might be present in bone, tissues or organs.

The committee noted that the current risks of blood transfusion-associated transmission of vCJD from tissue/organ donation are lower now than prior to the introduction of the recent, additional precautionary safety measures to protect the blood supply, e.g. exclusion of previously transfused blood donors.

The committee considered that a small background risk of vCJD infection exists in the population as a whole. Therefore, a risk of transplant associated transmission of vCJD exists from tissue/organ donors that have not received blood transfusions. The additional risk as a result of a donor having received a blood transfusion at any time prior to donation is likely to be small.

The committee noted that relevant data on prion replication and spread following transfusion were extremely limited and mostly from animal models not directly applicable to the human situation. However, in the first few days following a transfusion with infected blood, significant prion replication was unlikely and, therefore, tissue prion levels would be related to the blood supply to the tissue in question. Highly vascularised organs such as liver, lung and spleen were more likely to contain the agent compared with other organs.

A balance must be struck between the small increased risk of prion transmission by transplant and the benefit to patients of receiving a transplant, especially where tissues/organs are scarce. The

committee noted that screening of cadaveric donors for the presence of abnormal prions prior to transplantation, washing tissues/organs to remove blood before their use, and avoiding the pooling of tissues may reduce transplant associated transmission risks.

## **REPORT FROM THE AD HOC EPIDEMIOLOGY SUBGROUP ON UK BARB CASES**

In March 2004, an ad hoc SEAC Epidemiology Subgroup on UK BARB cases was convened to advise on the design of a case control study to identify possible causes of BSE cases born after the 1996 reinforced feed ban (BARB cases). The Subgroup was reconvened in April 2005 to discuss preliminary results from the study. Professor Noel Gill, chair of the Subgroup, reported the outcome of the Subgroup's considerations to SEAC.

SEAC endorsed the Subgroup's recommendations for further analysis of the results using different criteria to define the controls used in the study, to continue the study using a more sophisticated group of controls, and for prospective evaluation of animal feed use and supply routes and the potential for cross-contamination of feeds. These issues will be considered by SEAC at the June meeting when Professor Hill, who has been commissioned by Defra, reports on his investigation of the cause of BARB cases.

SEAC considered it important to use new more sophisticated molecular approaches to characterise BARB cases and gather as much information as possible on cases as they arise.

## **USE OF CATEGORY 3 ANIMAL BY-PRODUCTS IN FERTILISER**

Defra asked SEAC to consider a release assessment to estimate TSE-related infectivity levels associated with the use of rendered category 3 animal by-products in fertiliser for non-pasture land.

The committee was generally content with the approach used and assumptions made in the assessment. It was recommended that further consideration is given to the possibility that potentially infected fertiliser is not evenly distributed. It was noted that little is known about the persistence of TSE agents in soil. Thus, intra-species recycling of mammalian protein in fertiliser was possible.

Although, the risks of transmission of TSEs via this route may be very small, a watching brief should be maintained.

## **VERTEBRAL COLUMN: AGE AT WHICH SPECIFIED RISK MATERIAL**

FSA asked SEAC to review an assessment of the possible UK exposure to BSE associated with vertebral column from cattle aged under 12 or under 30 months.

SEAC was content with the approach used and assumptions made in the risk assessment. The committee noted that some uncertainties remained with regard to the extent of the species barrier between cattle and humans although these uncertainties do not significantly affect the overall conclusions. Exposures had been calculated for the UK population, without considering whether a small subgroup within the population might consume most of the UK beef on the bone. Nevertheless, although exposure would be higher in consumers of beef on the bone than for the general population assumed in the study, it was considered that the increased risk to this population group would still be very small. The committee concluded that the difference in the BSE-related risk from vertebral column as specified risk material from cattle of 12 and 30 months of age was negligible.