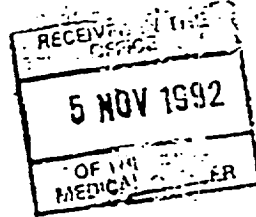


IN CONFIDENCE



CMO

From: Dr J S Metters DCMO
4 November 1992

70.11.92

Dr Metters to
George
intense meeting (E)

TRANSMISSION OF ALZHEIMER TYPE PLAQUES TO PRIMATES

1. Thank you for showing me Diana Dunstan's letter. I am glad that MRC have recognised the public sensitivity of these findings and intend to report them in their proper context. This hopefully will avoid misunderstanding and possible distortion by the media to portray the results as having more greater significance than the findings so far justify.

2. Using a highly unusual route of transmission (intra-cerebral injection) the researchers have demonstrated the transmission of a pathological process from two cases one of severe Alzheimer's disease the other of Gerstmann-Straussler disease to marmosets. However they have not demonstrated the transmission of either clinical condition as the "animals were behaving normally when killed". As the report emphasises the unanswered question is whether the disease condition would have revealed itself if the marmosets had lived longer. They are planning further research to see if the conditions, as opposed to the partial pathological process, is transmissible.

What are the implications for public health?

3. The route of transmission is very specific and in the natural state of things highly unusual. However it could be argued that the results reveal a potential risk, in that brain tissue from these two patients has been shown to transmit a pathological process. Should therefore brain tissue from such cases be regarded as potentially infective? Pathologists, morticians, neuro surgeons and those assisting at neuro surgical procedures and others coming into contact with "raw" human brain tissue could in theory be at risk. However, on a priori grounds given the highly specific route of transmission in these experiments that risk must be negligible if the usual precautions for handling brain tissue are observed.

4. The other dimension to consider is the public reaction. To some extent the GSS case demonstrates little more than the transmission of BSE to a pig by intra-cerebral injection. If other prion diseases can be transmitted in this way it is little surprise that some pathological findings observed in GSS were also transmissible to a marmoset. But the transmission of features of Alzheimer's pathology is a different matter, given the much greater frequency of this disease and raises the unanswered question whether some cases are the result of a transmissible prion. The only tenable public line will be that "more research is required" before that hypothesis could be evaluated. The possibility on a transmissible prion remains open. In the meantime MRC needs carefully to consider the range and sequence of studies needed to follow through from the preliminary observations in these two cases. Not a particularly comfortable message, but until we know more about the causation of Alzheimer's disease the total reassurance is not practical.



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