

RESPONSE FROM DR W SQUIER TO FURTHER QUESTION POSED BY PROFESSOR RATING

In a letter dated 25th November 2012 (240-004-028) ie shortly after his second report, Professor Rating stated:

“Dr. Squier could not prove the diagnosis of an osmotic oedema. I would like to ask Dr. Squier which influence time schedule will have on the neuropathological findings in a case
a. when oedema developed so quickly that death occurred in 2 - 3 hours time
b. when a child after 8 to 10 hours came to death.

This is the question which time is needed to see the characteristics of myelinolysis. It should be taken in mind that these changes were most pronounced in the pons.

To my reading and understanding the report is consistent with an acute osmotic oedema.”
(my emphasis)

What is the significance of damage to the myelin sheath to the differing positions of Professors Rating and Kirkham on the cause of Adam's acute cerebral oedema?

There was no evidence of myelin damage in Adam's brain; the brain was swollen but otherwise there was little identifiable pathology. The reason is almost certainly the very short period of survival, had there been a longer period of survival more pathology may have been seen.

As noted in my response of December 4th 2012, it probably takes at least 4-5 days or more for myelin swelling and damage to be identifiable by light microscopy. There are few histological cases of hyponatraemia with very short survival and brain scans may not be of sufficient resolution to distinguish between early myelin damage and swelling.

Waney Squier January 12th 2013