Supplementary Medico-legal report 17.02.12

Adam Strain

Dob: 4th August 1991
Dod: 28th November 1995

Prepared on behalf of:

THE INQUIRY INTO HYPONATRAEMIA RELATED DEATHS
Chairman Mr John O'Hara QC

By:

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1. I have read the report of Prof Kirkham and I would like to make several comments; citations from Prof Kirkham's report are italicised and my comments follow.
2. *30:A post mortem was carried out on the 29th November 1995 (011- 010-034) by Dr Armour who reported the cause of Adam's death as cerebral oedema secondary to dilutional hyponatraemia and impaired cerebral perfusion during the transplant. The case was reported in the literature. Dr Squier, the expert neuropathologist instructed by the Inquiry, feels that the brain weight was not greater than expected for a 4 year old child. She has pointed out that the majority of the swelling involves the posterior structures. She has not found any evidence of hypoxic brain damage or ischaemic brain damage in a distribution consistent with reduced cerebral perfusion pressure.*
3. Note that there is uncertainty about what the brain weights actually were. The suggested fresh weight was about in the normal range but the change on fixation was far greater than would be expected, indicating that one of these weights may have been incorrect.The brain scan observations give a far more accurate reflection of the degree and distribution of swelling as they record the state of the brain close to the end of surgery. Brain weight may alter during ventilation due to impaired blood/oxygen supply.
4. *49:Even if there was no venous sinus thrombosis, the difficulty experienced in cannulating the jugular vein on the left, perhaps related to previous tying off of this vessel, together with the position of the central venous pressure line in the right jugular vein, would have reduced the opportunity for compensating for increasing cerebral oedema by drainage of blood into the jugular veins (see figure 1).*
5. I suggest that prolonged obstruction of the jugular veins may be overcome by diversion of flow through the paravertebral plexus.
6. *50 Unless Dr Squier or Dr Anslow can exclude PRES on neuroradiological or neuropathological grounds...*
7. I remain to be convinced that there are any reliable neuropathological grounds for making this diagnosis. As far as sinus thrombosis is concerned I did not see any of the pathological features in the brain tissue usually associated with this condition. It was not sought and not described at autopsy. However it should be noted that sinus thrombosis may not be fixed and may cause secondary effects on the brain even though it is not identified at autopsy. It is not uncommon to see small intravascular thrombi in the brain at autopsy and they are constantly forming and lysing in life. It is therefore conceivable that sinus thrombosis could have occurred. I know little about PRES as it is not a condition we diagnose pathologically-yet. I think it is a very interesting condition and well worth consideration.

Waney Squier

17 February 2012