

2/2/96

Dear Dr Murnaghan,

Thank you for forwarding the expert analysis from Dr Sumner regarding Adam Strain. I am pleased that neither of the two experts have discovered other possible causes not already accounted for in my own discussion. In other words I'm somewhat relieved that I didn't miss or exclude anything which may have prevented Adams death.

However, I must point out several major problems with their evidence,

1. Both experts have quoted a paper in which the cause of cerebral oedema was the effect of Inappropriate ADH and hypotonic solutions in otherwise healthy children. I was aware of this effect as stated in my previous letter but Adam did not fit this picture. He had polyuric kidneys which means that they would not respond to ADH to cause water retention!. Nor does the reference paper account for other oedematous organs such as the lungs. This also means that the major argument used by both experts is seriously flawed in this case.

2. No account is given as to the blood sugar control in Adam who was used to receiving a sugar load during the night (hyperinsulinism) and the fact that his blood sugar was only 4 mmol/L at the end of surgery. How was the blood sugar to be maintained without the type and quantity of fluids which he was given? Again the reference paper did not discuss the hyperglycaemia which occurs postoperatively and its effect on cerebral oedema.

3. Dr Sumner suggests that he became hyponatraemic because of hypotonic fluids and plasma. In fact the plasma given to Adam was HPPF which contains 130-150 mmol/l of sodium ions.

Apparently then the whole discussion of Adams management comes down to the fluids given ie. type and quantity. I obviously agree with the two experts that for a healthy normal child such fluids may be excessive. However both have failed to comprehend the physiological differences in this case and have used dubious scientific argument in an attempt to explain cerebral oedema. In Adams' case, where the urine output of his native kidneys had to be maintained, deficits had to be replaced and extra fluids had to be given to provide the donor organ with adequate function, the type and volume of fluids were appropriate.

Yours sincerely,

  
Dr Robert Taylor