Witness Statement Ref. No. 014/1

**NAME OF CHILD: Adam Strain**

**Name: Mary O'Connor**

**Title: Consultant Paediatric Nephrologist**

**Present position and institution: Consultant Paediatric Nephrologist, Royal Belfast Hospital for Sick Children, 180 Falls Road, Belfast**

**Previous position and institution: as above**
*[As at the time of the child's death]*

**Membership of Advisory Panels and Committees:**
*[Identify by date and title all of those between January 1995-December 2004]*

**Previous Statements, Depositions and Reports:**
*[Identify by date and title all those made in relation to the child's death]*

**None requested**

**OFFICIAL USE:**
**List of previous statement, depositions and reports attached:**

| Ref: | Date: | |
|---|---|---|
| | | |



MOC

**Particular areas of interest**
*[Please attach additional sheets if more space is required]*

**1. Describe your role in the care of Adam following his transplant surgery.**

At the time of Adam's renal transplant on 27th November 1995 I was employed as a Consultant Paediatric Nephrologist in the Royal Belfast Hospital for Sick Children. I had taken up this post on 1st November 1995. Dr Savage and I had named responsibility for individual patients but provided cross cover for each other at nights, weekends and at times of holiday and emergency when the named Consultant was not available.

Adam was a patient of Dr Savage's and preparation for his renal transplant had been made the previous evening on 26th November 1995. The renal transplant surgery was in progress when I arrived in the Hospital on the morning of 27th November 2005.

During a renal transplant the Consultant Nephrologist prescribes the immunosuppressive medication and is present to prescribe the immediate post operative drugs and fluid regime. At some time during the morning of 27th November 1995 Dr Savage had commitments in the School of Medicine, Queen's University in his role as Senior Lecturer and hence I made myself available to attend to Adam's post operative care.

I was present in theatre towards the end of the operation (I do not recall precise timings). I was aware that at the end of surgery Dr Taylor discovered Adam to have fixed dilated pupils. My role in the Intensive Care unit immediately following surgery was to make a clinical assessment of his condition, to request any necessary investigations and to prescribe any necessary fluids and drugs. I also contacted Dr Savage to inform him of the situation and he returned immediately from the University.

**2. Describe in detail your analysis of the condition of Adam following his transplant surgery and review of its likely cause.**

My statement is based on my written notes as these events occurred almost 10 years ago. My notes confirm that I examined Adam at 12.05pm on 27th November 1995 (Inquiry Reference numbers 058-035-135,136,137). I have recorded that he did not breathe following surgery and that his pupils were observed to be fixed and dilated. There was no history obtained of any cardiovascular instability during the operation. Peri-operative blood pressure had been 118/78mmHg and peri-operative CVP had risen to 30mmHg. My note written at that time states that the CVP was known to be 17mmHg at the start of procedure and in view of this high initial CVP the accuracy of recordings was uncertain. I had been informed that there had been difficulty inserting a central venous line at the start of the procedure and I made a presumption that this difficulty was due to previous multiple venous access. I assumed that he may have had one of his external jugular veins tied off as this was common practice at the time of insertion of central lines in RBHSC in 1995. I had not read previous operation notes at this time to see if this was confirmed. However I felt it likely that the CVP measurement may have been unreliable.

**Particular areas of interest (Contd)**

I summarised the fluid balance as recorded in the anaesthetic chart as I would do in all cases of renal transplantation. I have recorded that there was 911ml of blood in the suction bottle during theatre presumed to be blood loss and that the total input during theatre consisted of 1 litre of HPPF, 500ml of Hartmann's solution, 1500ml of 0.18% saline 4% dextrose solution and 250ml of packed red cells.

On examination I noted that Adam's pupils measured 7mm and both were equal and fixed. I saw haemorrhages on both his right and left fundi and the disc margins were indistinct. I observed him to be puffy and recorded that the CVP measurement at the time of my examination was now 11cm of water. I recorded that there had been 49ml of output from his native kidneys from the time of transplantation and that there had been no recorded output to date from the transplanted kidney. It is possible to differentiate the outputs as there was a feeding tube inserted into the transplant ureter and an ordinary bladder catheter inserted separately into his bladder.

My notes state that I queried two causes for his neurological abnormalities. I questioned in my notes whether he had "coned" due to cerebral oedema and noted that he had had high fluid intake and possible abnormal cerebral venous drainage. However it is normal for there to be a very positive fluid balance at the end of a renal transplantation as a high central venous pressure is required in order to perfuse the transplanted kidney adequately. I also queried whether a problem with the epidural may have led to a cerebral problem.

My plan of action was to give Mannitol in an effort to decrease any possible cerebral oedema and I agreed with Dr Taylor's management of hyperventilation. I restricted his fluid intake.

An urgent urea and electrolyte profile, CT scan of brain and neurology opinion were sought. Routine anti-rejection therapy was also prescribed by myself.

My subsequent notes of approximately 1hr 15mins later (Inquiry Reference number 058-035-138) state that a chest x-ray had now been obtained showing that the central venous line was seen going up through his neck vessels rather than downward toward the heart and I queried this may have caused some obstruction of venous return. I have also recorded that the post operative serum sodium was 119mmol/L and I queried that this was due to haemodilution. An emergency CT scan that afternoon confirmed generalised cerebral swelling.

My analysis during the post operative period was that the cerebral oedema was likely to be related to the drop in serum sodium from a pre-operative level of 139mmol/L on 26th November 1995 to a post operative level of 119mmol/L at 1pm on 27th November 1995. I assumed that his normal polyuric state complicated his fluid management and that his possible abnormal cerebral venous drainage may have made him more susceptible to cerebral oedema.

My main role in the care of Adam was between 12.05pm and approximately 1pm on 27/11/95 when Dr Savage took over his management.

**Other points you wish to make including additions to any previous Statements, Depositions and or Reports**
*[Please attach additional sheets if more space is required]*

**THIS STATEMENT IS TRUE TO THE BEST OF MY KNOWLEDGE AND BELIEF**

**Signed:** Mary O'Connor **Dated:** 19/7/05

bb&Co. Brangam Bagnall & Co. Solicitors

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Our ref: RGH/A/15/GB

Your ref:

09 August 2005

Ms Fiona Chamberlain
Solicitor to the Inquiry
Inquiry into Hyponatraemia-related Deaths
3rd Floor
20 Adelaide Street
BELFAST
BT2 8GB

Dear Ms Chamberlain

***INQUIRY INTO HYPONATRAEMIA-RELATED DEATHS***

I refer to previous correspondence in connection with the above.

The Trust has noticed a discrepancy in the statement of Dr O'Connor. It appears that Dr O'Connor initially referred to central venous pressure being measured in mmHg whereas on page 3 paragraph 2 she refers in lines 4/5 to 11cm of water. This should read 11mmHg and we would be grateful if you would confirm that you have received clarification of this typographical error.

We look forward to hearing from you.

Yours sincerely

Gary Daly
for Brangam Bagnall & Co
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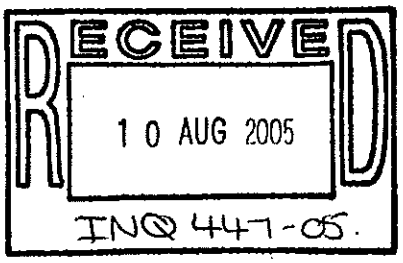


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