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Your Ref:
AD-0150-10

Our Ref:
NSC B04/1

Date:
30 July 2010

Ms Anne Dillon
Solicitor to the Inquiry
Arthur House
41 Arthur Street
Belfast
BT1 4GB

Dear Madam

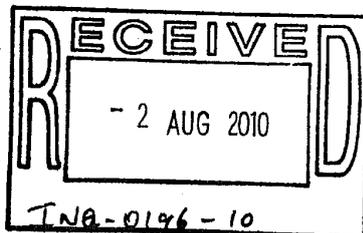
RE: INVESTIGATION INTO THE DEATH OF ADAM STRAIN

I refer to the above and to your letter dated 5th July 2010. In relation to point 2 of your letter I enclose Transplant Guidelines that would have been in use in the RBHSC from 1990 until 1995.

Yours faithfully

pp *Nicole Dooker*
Wendy Beggs
Assistant Chief Legal Adviser

Direct Line: [REDACTED]
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Providing Support to Health and Social Care



Renal Transplantation in small children

ADMISSION PROTOCOL

History on Admission

Note residual renal function + urine output
recent infections, UTI, peritonitis etc.
recent contact with infectious diseases
type of dialysis
drug therapy - inform anaesthetist of anti-hypertensives
check transplant/on call list

Examination on Admission

Note state of nutrition and hydration
blood pressure
height and weight
catheter exit site condition

Investigations on Admission

10 mls clotted blood to BCH Typing Lab.
Group and cross match 4 units blood
FBP WCC platelet count
MSU
CXR
CAPD fluid culture
U + E and total protein
10 mls for virology

Obtain written consent from parents

Arrange haemodialysis if indicated
Assess degree of fluid restriction caused by pre-op fasting
Ensure parents have transplant booklet
Contact Transplant Surgeon, Paediatric Surgeon, Anaesthetist,
Theatre, ICU

INTRA-OPERATIVE FLUIDS

CAPD patients may be relatively hypovolaemic and hypoalbuminaemic. Blood, PPF or N/2 Saline may be required before unclamping the artery to ensure a good intravascular volume. This is determined by reference to BP and CVP levels.

Renal Transplantation in Small Children

IMMUNOSUPPRESSION

Intra-operative

Hydrocortisone 5 mg/kg i/v Stat.
Azothioprine 5 mg/kg i/v Stat. if wcc >4000

Post-operative

STEROID

1. First 24 hours hydrocortisone 5 mg/kg i/v QDS.
2. Daily subsequently for 5 days
Prednisolone 1 mg/kg orally or equivalent dose
hydrocortisone (4 mg/kg) i/v in 2 divided doses.
3. Then Prednisolone 0.5 mg/kg/day in a single morning dose
for 1/12
4. Then 1 mg/kg alternate days tapering.

AZOTHIOPRINE

1. Daily 1.5 mg/kg/day until GFR 1/3rd normal for age then
increase to 3 mg/kg/day if wcc >4000.

CYCLOSPORIN A

To be introduced once graft function is stable.

Renal Transplantation in Small Children

POST-OPERATIVE MANAGEMENT

After transplantation patient will return initially to ICU

- Lines required
- (i) arterial line for BP
 - (ii) Multiple lumen central venous line for CVP and i/v fluids
 - (iii) urinary catheter

ANALGESIA Morphine infusion 10-20 micrograms/kg/hr

Fluids

Arterial line - 0.9% saline with 1 unit/ml heparin running at 1 ml/hr

- CVP
- (a) 0.18% saline 4% dextrose (n/5 saline) with 1 unit/ml heparin
 - (b) morphine infusion PRN 0.025 mg/kg/hr in N/5 saline at 1 ml/hr volume
 - (c) n/2 or N/5 saline to replace insensible loss + output.

Rate of fluid input is set to maintain

- (i) CVP at 4-8 cm H₂O
- (ii) BP appropriate for size of child
- (iii) urine output 2-4 mls/kg/hour
- (iv) N/2 saline is usually required to maintain plasma Na

CVP ↓	BP	Rx
N or ↓	↓ or N	Volume expansion
N	↓	Dopamine infusion
↑	↑	Reduce i/v fluids ? hydrallazine or frusemide

URINE OUTPUT

If urine output is poor after correcting vital signs ? try one dose of Frusemide 2 mg/kg i/v stat.

If urine output falls in association with haematuria consider renal vein thrombosis.

Hypertension

Common in the immediate post-operative period and best managed i/v hydrallazine or labetalol.

Renal Transplantation in Small Children

Post-operative Investigations

(i) 4-6 hourly initially

blood gases

U + E, Ca⁺⁺

glucose

Hb

Urine output volume + dipstick testing for
blood and urine

(ii) Daily

U + E Creatinine

24 hr urine collection of protein and creatinine
clearance

Albumen + total protein

FBP DWCC Platelets

? coagulation

CXR

Fluid input/output

(iii) Twice weekly

MSU

24 hr urine for protein and creatinine clearance

DTPA ± Doppler USS of renal transplant vessels.

SMAC

M. Savage
September 1990