CLINICAL NOTES

CONOR MITCHELL.
CH 334505
dob. 12/10/87.

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DATE/TIME	
McHUGH E 9/05/03.	21[25]. To cover period from admission at ~ 7pm this evening. 15 yr. old boy with a history of cerebral palsy, who has a 10 day H/O general malaise. Admitted to Ft Craigavon. Clinically he appeared to have dehydration. During the early part of his admission he had a number of seizures and required resuscitation, intubation and admission to the ICU in Craigavon. Other medical factors to consider — CT scan suggesting subarachnoid haemorrhage. — urinary tract infection. Examination in PICU following admission The clinical picture is confusing: fixed dilated pupils (present on admission to PICU). no response to supra-orbital pain (PICU) no spontaneous movements. No reflexes (including response to pain) in both arms. Exaggerated withdrawal reflexes in legs (feet. ? suggesting spinal reflexes. The child has had no sedation or muscle relaxants either in Craigavon or PICU RBHSC Received phenytoin to control seizures. The nurse who transferred Conor from Craigavon witnessed in Craigavon an episode of

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movement in left foot, when mother asked Conor to move his (L) foot in response to her stating that she would bring in his favourite CD if he wanted it. I asked Conors mother to repeat this test but unfortunately while the verbal command was being given, the sheet covering his foot was being withdrawn simultaneously, and the movement which I observed could also have been due to an exaggerated spinal reflex. When I repeated the verbal command there was no response from foot or anywhere else. Even slight movement of the sheet would elicit reflex withdrawal movements and clonus in (L) foot and (L) leg.

He is also dependant on adrenaline infusion to maintain blood pressure, ar during switch over of pumps BP ↓ 50 systolic and required 2 x 0.3 ml boluses of adrenaline from syringe driver.

HR ~ 130. Requiring minimal ventilation. pCO_2 low, and ventilation reduced to allow pCO_2 to rise slightly.

CXR shows clear lung fields. T/P ET tube lower border T_2. → inserted in Craigavon
(L) subclavian central line in aortic arch.
The patient has received 20mg morphine (cut ~ 24hrs). I feel that the subclavian arterial line should not be removed at the moment because of the risk of haemorrhage. Patient to receive no further morphine.

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To continue with ciproxin, acyclovir and ceftriaxone infusion.
Dehydrated fluids to full maintainence with 0.9% Saline.
Urine sent to labs for urinary osmolality + osmolality.
Na ↑ 160 on blood gas machine. repeat sample sent for serum Na to labs
He is at risk of developing diabetes insipidus, but we need definite biochemical evidence before DDAVP should be given.
11[20] pm Currently being actively re-warmed

I have had a discussion with Conor's mother about his clinical state. She has a good understanding of just how seriously ill he was. She is very angry over a number of issues including the illness which Conor is now suffering from. I reassured her that she herself is not to blame for anything which has happened to him. I reassured her that he is not suffering or is distressed. I told her that I believed Conor will die from this overwhelming illness, but with such a complicated clinical picture it would require expert neurological interpretation of the physical signs, something which I was not qualified

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to do. While I believed that he would not survive this episode, I also stressed to her that we would not be withdrawing any treatment tonight, because of the seriousness of the situation and also we had to be absolutely sure of the prognosis. This would take time, principally to allow more investigation to be performed and to keep his neurological status under close observation. Currently we believed that the working diagnosis, which started current chain of events was an infection, most likely viral which may have attacked C.N.S.

J McGuigan.

CLINICAL NOTES

CONOR MITCHELL

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DOB 12/10/87

DATE/TIME	
9/5/03.	12MN.
	15yr old ♂ ↑ spastic quadraplegia & epilepsy admitted to CAH ¼ ago. Previous Hx of being unwell for 10/7 with vomiting, lethargic & off form. ↓ Oral intake. On arrival to CAH admitted to medical wd. A of presumed viral illness & possible UTI made. Initial Bld Ix showed WCC 19.1 Plt 332 Hb 13.1 Na 138, Urea 7.8 CR 50, pH 7.41 Rehydrated ↑ IV fluids & covered ↑ IV Ciproxin. Over next 24hrs developed multiple events described as follows - arms flexed head hyper-extended, grimacing, back arching, developed blotchy rash over head & abd. Events lasting few sec then lethargic ↑ poor response. Appeared yesterday evening to have similar event assoc ↑ pallor & apnoea followed by respiratory arrest. At time of arrest ~845 PM intubated & ventilated → ICU in CAH. ∆ presumed ICH ∴ → CT SCANNER. CT scan showed large (L) porencephalic cyst & smaller (R) porencephalic cyst. Supratentorial region - CSF density with minimal cortical activity tissue. Abnormal high density material on tentorium cerebelli & around basal cisterns → suggestive of subarach haem. Basal cisterns described as tight.
↑ Given IV Nimotan at ~9pm 8/5/03	CT Scans reviewed by Mr Cooke neurosurgeon - no neurosurgical intervention required. ∴ Maintained in ICU CAH overnight with pupils always fixed & dilated, no spont breathing. Developed hyperpyrexia

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In am thought GCS ↑ from 3/15 to 6/15. Still no pupillary response but thought to move (L) leg on request of grandmother. Felt to be more than a spinal reflex ∴ transferred to PICU for further Mx.
No underlying Δ made.

Arrived PICU ~ 10^{00} pH. Now fully ventilated with no muscle relaxant or sedation on board.
O/A Clinical exam
~~Pupils~~. Fundi - appear normal.
No doll's reflex present.
No corneal reflex
No nasal tickle.
No gag or cough reflex.
Peripherally no obvious spontaneous movement.
When touching feet some withdrawal noted + some movement of toes.
No movement of upper limbs noted.
Reflexes Present (R) bicep + (L) bicep +
(R) knee +/- (L) knee +
(R) ankle + (R) ankle +
Plantar ↑ ↑
Beats of clonus noted in both ankles.
Fixed flexion deformities at elbow (R)
Fixed flexion at hips.

Reexamined at 12 MN.
Above reconfirmed. Grandmother present. On request x2 (once on one occas → dorsiflexion of (L) foot appearing to comply with G'mothers request. ? spinal | ? volunt
Difficult to accept given absolutely no obvious brainstem activity.

CH 334505
MSTR CONOR MITCHELL
[redacted]
MD/OP

12/10/87
Male
[redacted]
SHSSB
CONSULTANT

DATE/TIME

In PMH NVD at Term ~7lb
Appeared well at birth - developmentally delayed
• referred to Dr Hicks for assessment. Δ spastic quadriplegia R > L ↑ ↓ visual function.
Original CT SCAN - infarction (L) parietal → temporal
infarction (R) frontal
∴ vascular occlusions (L) middle cerebral artery ± branch of (R) ant cerebral artery. felt to be prenatal origin

On epilim for seizures - ~~10~~ x3 "staring" events from Christmas until admission.

Presenting Adrenaline 8mg/100mls 3mls/hr.
Ciproxin 200mg IV BD.
Acyclovir 250mg IV 8hrly.
DDAVP 2mcg.

Ix to date.
• CT SCAN - as overleaf.
• [redacted]
• Na 164 K 3.6 Urea 4.0 CO_2 21 Alb 34 CR 53
Ca 2.15 mg 0.9 PO4 2.27 T.bil 7. AST 20
ALP 116 ALT 14 GGT 19.
• Salicylates <10.
Alcohol <10.
• Paracetamol <4.0.

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• Urinary osmolality Na 21 K 16 Urea 45 Osmol 129

Conclusion.

Child c Hx of epilepsy presented viral illness → hospital develops seizures then after seizure arrested → ICU, noted to have SAH on CT & old neurology

Brainstem responses -ve. ? some voluntary movement/ ? Spinal reflexes.

Now developed - diabetes insipidus

- needing inotropic support for BP

~~- worsened after encephalitis~~

? Pathology.

Is this all related to a viral illness causing cerebral irritation & seizures ~~intracranial aneurysm~~ → S.A.H → brainstem signs

Need further Ix to help make Δ & longer period of neurological obs

① ~~broad~~ Cover for bacterial component as Hx UTI
∴ add ceftriaxone to antibiotic coverage

② Cont c IV acyclovir at present

③ Presently on DDAVP for Diabetes Insipidus

④ Arrange for neurology opinion in am - I will discuss c Dr Hicks. EEG may be helpful in looking at brain activity ● (+/- any Sz activity)

⑤ If not sent send blood for PCR - viral illnesses & atypical viral titres.

⑥ If any stools → send for viral culture.

⑦

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Conor Mitchell
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ROYAL BELFAST HOSPITAL FOR SICK CHILDREN
BELFAST BT12 6BE

DATE/TIME	
	Long discussion c̄ Conor's mother + g'mother explained how unwell Conor is and present medical condition. At present unresponsive with no obvious brainstem function. ? spinal reflex movements of lower limbs but only had short period of obs with Conor + need longer period of assessment of neurological state. Although viral illness an explanation not a confirmed diagnosis + we would need further Ix to help confirm or refute this Δ + also further Ix as to underlying brain activity.
	Conor's mother + g'mother are agreeable to further period of observations + approp Ix as to as required to make Δ.
	[signature] (BOTHWELL)
10.05.03	WRD Conor. 10.05.03 [illegible]
	~~[illegible]~~ CANCELLED WRONG PAGE
	~~[illegible] R6 17.0.9 [illegible] 0.7~~
	~~Fluids [illegible] on [illegible] – 4 [illegible]~~
	~~[illegible] 0.9% NaCl + 20 mmol KCl~~
	~~[illegible] > 30 ml/hr c̄ 0.45% NaCl / 2.5% Dextrose~~
	~~Meds~~
	~~IV cefotaxime~~
	~~IV acyclovir~~
	~~Tc DDAVP (if [illegible] > 60 ml/hr)~~ PTO

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10.5.3
Doherty
Reg.
4 AM.

R/V
Problems as outlined above.
also
① Ceftriaxone initiated as well as Ciprofloxin as persisting leucocytosis
② Rx for diabetes insipidus
(Δ c ↑ Na^+ + serum osmolality & low urinary Na^+/osmolality)
a. DDAVP 2 mcg I.V.
b. Maintenance fluids
0.9% Saline @ 60 ml/hr
+ replace urinary losses c
N/2 Saline
(Previous hour's U/O ≥ 30 ml per hour)

③ Increased (?) spontaneous movements of legs + to a lesser extent arms characterised by flexion at hip + knee + dorsiflexion at ankle
(L leg > R leg)
plus minor adduction at shoulders
bilat.
– ? Spasms
– ? Seizures (do not wish to Rx at present in case EEG reqd in am.).

CH 3343505
MSTR CONOR MITCHELL
[redacted]
12/10/87
Male
[redacted]
SHSSB
MD/OP CONSULTANT

DATE/TIME	
10.5.03 Dhuty Reg 7.30 AM	Greater variety of movements through night & this morning (? Possibly with warming) Movements of legs + shoulder as outlined above. Also lateral flexion of neck to right Movements appear to be in response to parent's touch. Not reliably to voice Mother obviously anxious + confused re. prognosis SM
10/5/03	9 AM. Review of Conor. Through night remained fully ventilated. No spont breathing felt to have more movement of lowe limbs - ? in response to voice. Some movement noted in (R) shoulder Presently on IVI Adrenaline 0.3mls/hr IV Acyclovir IV Ceftriaxone / Ciprokin DDAVP IVI Maint fluids 0.9% N. Saline

NDW warmer.
O/E. Pulse 168 No rash noted
BP ~ 90/64
I—II + ml.
Chest clear.
CNS Pupils remain fixed + dilated
Fundi visualized + appear (N).
-ve Doll's Reflex.
-ve Corneal Reflexes
-ve Nasal tickle
-ve Gag/cough reflexes.
Peripherally
Some spontaneous flexion of legs noted
Reflexes Biceps (L) brisk (R) brisk
knee (L) brisk (R) brisk
Ankle (L) brisk (R) brisk
Plantars ↑ ↑

On looking at events
- appeared unwell at home ? prob viral illness into CAH + there developed multiple seizures ⊕ → Arrest. CT scanner showed S.A.H ? tight basal cisterns.
Appeared brainstem dead in CAH ICU & no obvious improvement re cranial nerves. Some peripheral movement noted ? spinal reflex movement. Appeared do improve: → PICU

Plan
Need to Discuss ? Dr Hicks present neurological state ~~and discuss with parents tests~~.

CLINICAL NOTES

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MSTR CONOR MITCHELL
[redacted]
12/10/87
Male
[redacted]
WD/OP
SH958
CONSULTANT

ROYAL BELFAST HOSPITAL FOR SICK CHILDREN
BELFAST BT12 6BE

DATE/TIME	
	• Presently full support maintained. Give time for situation to unfold.
	• Ensure coagulation normal. (signature) (BOTHWELL)
	Discussed c̄ Dr Hicks
	→ Need to see CT scan from CAH
	→ Discuss c̄ neuroradiology re CT SCANS
	→ Try to ~~arrange~~ for ~~[illegible]~~ repeat CT SCAN
	→ No sedation
	→ Will R/V later this AM
	(signature)
[illegible].05.07	W/R Dr Lo[illegible]
	Vent SIMV P 17/5 R 6 IT 0.9 FiO_2 0.3
	Fluids
	Diabetes insipidus fluids @ 63mls/hr Note Na 166
	Has 0.9% NaCl c̄ 20mmol KCl for maintenance
	0.45% NaCl/2.5% Dextrose to replace losses > 80mls/hr
	Meds IV ciprofloxacin
	IV ceftriaxone
	IV acyclovir
	SC DDAVP

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	[illegible]
	O/E GCS 5/15
	pupils size [illegible] and unreactive
	Chest - coarse crackles both lungs
	Air entry [illegible]
	BP 84/[illegible] HR 170
	[illegible]
	CNS Brisk reflexes throughout
	Plantars ↑↑
	R/V Continue current fluid [illegible]
	Watch serum Na+ + [illegible]
	Radiology reg contacted will retrieve CT films
	from telelink + [illegible]
	→ for repeat CT/scan after 12 [illegible]
	[illegible] (GRANT) [illegible]
10/5/03. Conn.	1) Dr Phillips James (Wolfson Centre, Dundee University) contacted @ family's request. No changes in Conor's management suggested.
	2) CT scan transfer under full monitoring uneventful (results pending ; no obvious SAH seen). [illegible]
10/5/03	14[10].
	Discussion c̄ mother + g'mother
	CT scan performed + R/V films by neurosurgeons
	verbal from neuroreg no signif IC Haemorrhage
	Plan to continue with full support for Conor at
	present + cont to monitor neurological status

THE ROYAL BELFAST HOSPITAL FOR SICK CHILDREN BELFAST BT12 6BE

WNC 762

GH 7655

CLINICAL NOTES

CH 334505
MSTP CONOR MITCHELL
[redacted]
12/10/87
Male
[redacted]
SHSSB
MD/OP CONSULTANT

DATE/TIME

Asked whether likely Conor will make full recovery to pre illness state. Explained highly unlikely given Conor's Clinical course.

[signature]

10.5.07 I. Rennie Neuro registrar

CT Brain.

- Compared made with CT dated in CAH
- There is diffuse swelling of the brain with obliteration of 4 ventricles + basal cisterns
- Loss of grey/white differentiation throughout both frontal/temporal/parietal lobes
- cerebellum spared.
- Large parenchymal cyst on LT side + other large standing changes.
- NO intracranial haemorrhage.

- Conclusion -

- Extensive diffuse oedema of majority of brain including mid brain + brain stem. Loss of grey/white differentiation suggestive of infarction; cause not apparent but ~~[illegible]~~ ischaemic changes would give this appearance

[signature]

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10.5.03 Neurology – Thank you
1750 I remember Conor & his family
(note made) from previous contact.
I have reviewed the course of
[signature] this illness
· with his mother
· from the documentation in the
chart from CAH
- from the notes made by staff
here
· by talking to staff here.
(later talked to grandmother)
Salient points
· his usual self until ~10 days ago
· then unwell c̄ ↓appetite/malaise
sore throat, ~~so~~ S/B GP symptomatic Rx
· 'sort of improved' until ~1 week
ago throat worse, vomiting S/B
GP ([illegible]) → infected throat + ears
Rx penicillin.
· improved for a day or 2 then
worse – vomiting changed to Amoxil.
· not back to baseline –
eating improved
vomit on + off'
"jiggly movements of legs
no overt Sz.
lethargic. + urine ?cloudy
· 3 days ago worse + → CAH.
· considered dehydrated Rx IV fluids
admitted. Na 133 urea 7.8 K?
Alb Bh WCC 19. CRP<5

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CH 334505
MSTR CONOR MITCHELL
[redacted]
12/10/87
Male
[redacted]
SHSS8
WD/OP CONSULTANT

ROYAL BELFAST HOSPITAL FOR SICK CHILDREN
BELFAST BT12 6BE

DATE/TIME	
	• concern by family re IV site as he was
	stiffening - head back, arms flexed,
[illegible] head	legs straight ? LOC, repeatedly.
	, IV removed, later resited.
	. then a more major event -
	stopped breathing, head back,
	blue, stiff all over.
	. moved to PICU. ventilated etc.
	. has not breathed since
	- has required adrenaline
	. Na 149 there so given H_2O [illegible]
	[illegible] ? total volume.
	also acyclovir + cefotaxime.
	. CAT ? subarachnoid haemorrhage
	plus longstanding changes
	given phenytoin IV - no sedative
	• transferred.
	[illegible]
	[illegible] Δ @ 6/12 & CAT.
	always had large head - he was
	a large baby ~~[illegible]~~ [illegible]
	Sz not a major problem
	recently - occasional staring
	c valproate.

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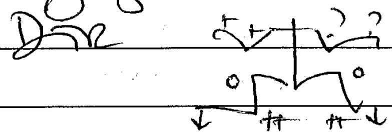
Alternative therapies Donal Delecato
& ?Hyperbaric O2. He recent
though mother says he had new
diaphragmatic exercises which
helped his breathing + his neuro-
developmental function had
improved in that he could crawl
and use his hands better.
Lives c̄ mother (? + father) in
and extension on grandparents.
house.

O/E seems tall OFC 59cm Scaphoce-
cephaly. thin.
no resps, no movement at rest.
NO response to voice light touch on
face, arms/hands, trunk, thigh.
Any touch on feet → flexion @
hip + knee & flexion ankle
no response to deep pain glabella
or sternum.
Pupils 5mm irregular unreactive
Dolls head neg. fundi: small(?pale)
discs vessels ✓ nil else
face no movt. Corneal – eyelash –
gag – trach. suction nil.



Imp/ Severe cerebral + brainstem dysfunction
– possibly irreversible damage.

CLINICAL NOTES

CH 334505 [redacted] ROTE CONOR MITCHELL

MD: OP

12/10/87 M [redacted] SHSSB CONSULTANT

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DATE/TIME

His neurological condition is unchanged. Dr Hicks & anaesthetic team are of same opinion that Conor he cannot survive this episode
After long discussion including if amino acids given & cerebral oedema reduced damage to nerves already occurred & would be unable to recover to previous level.

Mother & g'mother in agreement to withdraw Rx.

Jebathwell

I have read Re notes concerning Conor's condition as recorded by Dr Hicks & Dr Bothwell. We as a family ~~understood~~ understand Re implications of Conor's condition and acquiesce to Re removal of treatment.

Signed: Jonathan Mitchell.

12/3/93 1510 TAMR

I have examined Conor today and listened to his history with mother and other professionals.
I agree that Conor has no hope of recovery His brain stem is dysfunctional, loss of CVS/Temp resp control. His cranial nerves are unresponsive

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DATE/TIME	CLINICAL NOTES
	He does exhibit "abdominal" contracting which are reflexic and not under B. Stem calls Grandmother Ros also noticed these movements and agrees that they do not represent breathing efforts I have explained that occasionally drugs may be used to decrease reflex action but may not be necessary with Conor. Adrenaline Stopped, disconnected from ventilator Coroner to be contacted following death. RGL
12/5/03	15[15] Decision made to withdraw treatment agreed by all family. Full explanation by Dr Taylor & I re brainstem dysfunction & general decline in BP required & inotropic support over this afternoon. Notes read by Mr Mitchell & fully explained understood JEBothwell (BOTHWELL)
12/5/03	15[45] Treatment withdrawn & Conor placed on mother's knee. Gradually slipped away. Very peacefully throughout °E. Pupils fixed & dilated No Ht beat for >1min No femoral pulses noted >1min No spont resps Conor pronounced dead at 15[45] on 12/5/03.

THE ROYAL BELFAST HOSPITAL FOR SICK CHILDREN
BELFAST BT12 6BE

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CH 334505
MST* CONOR MITCHELL
[redacted]
MD/OP

12/10/87
Male
[redacted]
SHSSB
CONSULTANT

DATE/TIME

earlier this am – nil since.

Maintained on IV Adrenaline 1·5mls/hr
IV NM 0.9%. N. Saline maint
IV N/2 Saline /2.5%. dext to replace
urinary losses.

Now off antibiotics / antiviral medication

O/E. Unresponsive.
Spont resps. Pupils fixed & dilated
(R) oval.
No cranial nerve function noted
Peripherally reflexes elicited (R) biceps &
(L) & (R) knee jerks.

Imp
- No change in neurological status.
- Agree with Dkn to discuss brainstem testing & meeting with family
- Involvement of family with Fe clinical psychology may be helpful.
- Will discuss present state with family

[redacted]

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DATE/TIME	CLINICAL NOTES CH 334505 Page: 136.
12.5.03 Hicks	Neurology. Requiring ↑ inotropic support went thro brain / brainstem death protocol. No response to cranial n area thro movements of lower limb & local stimulation. no gag/cough response DTR + @ knee level. Pupils ~8mm (R) irregular oval No reaction to light No DOLS Head response No response to SD and ice water in (R) + then (L) EAM. No regular resps c Co2 9 However slight abdominal muscle movements noted ~~→~~ 5 mins after ~~blood~~ gas taken ? reflex or cerebrally driven.
Ingl	Unclear if Abd. muscle movements are reflex or cerebral. I am unable to confirm total brain / brain stem death at present, however I remain of the opinion that he cannot survive. Both
12/5/03	Discussion with p mother & g'mother prior to this Dr Hicks's assessment Given gravity of cond's medical condition I am of the opinion he cannot survive. He is presently unable to maintain BP or temp or salt balance

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THE ROYAL BELFAST HOSPITAL FOR SICK CHILDREN BELFAST BT12 6BE

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CH 334505
MSTR CONOR MITCHELL
[redacted]
MD/OP

12/10/87
Male
[redacted]
SHSSB
CONSULTANT

DATE/TIME	
	Agree w plan to d/c as @ present. Will see again in Am ? further Rx & plan re management.
	I support Dr Rothwell's plan & will continue to liaise w the + plan consultants re management.
	(In my opinion Conor is not likely to survive whatever happens, & whatever we do. Gma
11/5/03 1600hrs.	As above. Further developments: 1) Intra-arterial multilumen catheter (from CAH) removed with pressure above + below clavicle for 3' mins; pressure dressing applied: no serious bleeding noted, since then. 2) Family have obtained drive to share blood test results (? which ones) with a doctor from Russia in order to facilitate prescription of oral amino acids for Conor; I have said that in principle there will be no objection if these are routine/day-required tests; they will be in contact once the tests wanted are known. 3) re fluid balance: UOE awaited. Fluid balance remains very difficult in view of hypernatraemia and cerebral oedema.

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DATE/TIME	CLINICAL NOTES
	current aims are to remove fluid without further severe shifts in [Na], but this may be difficult. Overall outlook remains very bleak.
	(Urea/Electrolytes; Creatinine; shown to Family; CXT's tomorrow.
	INPATIENT PICU
12/5/03	WR Dr Taylor **Dr. JAY/02**
	• Intubated + ventilated SIMV 11/5
	- On Inotropes Adrenaline 1 ml/l.
	- ABG PH - 7.44 PCO_2 4.43 PO_2 14.8 E - 7.7
	- U+E Na - (154) K (3.4)
	- IV Fluids 65 ml/kg (- 23 mls)
	urine output 3.3 ml/kg/hr.
	- Apyrexic. Pelirium improvement. ? brain +
	- brain stem - + spinal reflexes +
	- On cipro floxacin
	plan keep temp
	- observe UOP
	- formal brain stem funds
	- observe PCO_2
12/5/03	Condition remains unchanged.
	Fully ventilated.
	Dependant on IV adrenaline to maint BP. Trial of ↓ today but BP ↓ !. ↑ again + fluid bolus 500mls/one hr to maintain BP.
	Temp not stabilized - needs heating blanket to maintain normal temp.
	No spont movement. Some withdrawal noted

CLINICAL NOTES

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MSTR CONOR MITCHELL
[redacted]
12/10/87
Male
[redacted]
SHSSB
MD/OP
CONSULTANT

[redacted]

-admitted with virus [redacted]. Potentially over re-hydrated in CAH & despite family being concerned about lips & face swelling.
Then began to seizure in CAH - Respiratory compression. Nothing done until went into grand mal. Then arrested → ICU.
Pressure put on mother to withdraw ventilation despite voluntary responses. Then told going to recover & move to RBHSC.

Arrived in RBHSC - told viral illness which was incurable & going to die.

Discussed c Mrs Scotman re present situation & my interpretation of events. Presumed viral illness into hospital had seizures (may or not had excessive we do not have documentation) heart. Then resp arrest & transferred to Adult ICU.
Pupils fixed & dilated, no brainstem function & following day ? volunt movement: transferred to PICU for further care.
From arrival - remains unresponsive, on IV adrenaline abnormal electrolytes
CT SCAN repeated yest & ext diff oedema of majority of brain & brain stem. Grey/white diff loss suggest infection ? cause

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DATE/TIME	CLINICAL NOTES
	prob ischaemic.
	In ~~my~~ opinion situation now inetriable & not going to make a recovery Happy for Mrs Mitchell / Miss Mitchell to cont c diaphragmatic exercises & amino acid therapy (if AA safe & we can assess this when they arrive) Ms Scotson understands situation & I have said that I will speak with he again at family's request (BOTHWELL)
11.5.3 G Doherty (Reg)	13.00 pm Dr Bothwell discussed situation at length with Ms Scotson. Dr Bothwell spoke for more than 40 min & her comments are outlined above Conversation appeared clear & amicable.
11.5.03 13⁵⁰ Hicks	Neurology Above noted Saw Conor Meffy really no change talked @ length with staff & with his uncle - viewing the Scenario & likely outcome.

CLINICAL NOTES

CH 334505
MSTR CONOR MITCHELL
[redacted]
MD/OP

12/10/87
Male
[redacted]
SHSSB
CONSULTANT

DATE/TIME	
11.5.3	WR Dr Loan
DOHERTY	
REG	Stable o/N.
	Ventilation unchanged
	(SIMV 17/5 ∠ Δbpm F_iO_2 0.25)
	u/o settled o/N
	Na^+ remains 160 +
	Neg spont. resp. effort
	R/V by Dr. Rothwell this am.
	o/e Pale Quiet.
	HR 115 BP 94/62
	HS I + II + nil
	Chest clear ? ↓ A/E (L) base
	PLAN
	① STAT DOSE FRUSEMIDE if required to obtain neg. balance (+ balance o/N)
	② DDAVP if u/o > 150 ml/h. (after initial dose of furosemide has "worn off" ie. with persisting severe DI)
	③ Avoid large changes in Na^+

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DATE/TIME	CLINICAL NOTES
	④ FLUIDS 40 Replace urinary losses > ~~70~~ ml/hr (Aim to replace ± NG feeds)
	⑤ c/w Maintenance (N) Saline + 10 mmol/L
	⑥ (L) Subclavian art line removed Pressure dressing applied.
11/5/03	12 MID DR BOTHWELL (Dr Doherty present) founded charity 9yrs ago Hyperbaric Trust. (International) PHD UCL – resp co-ordination / metabolism in children ± CP.
G' mother given permission to speak ± Mrs Scotson & give medical info.	Trial with children including Conor for hyperbaric Oxygen. Known family for yrs ~~[illegible]~~ because of this. Late on – neuro respiratory therapy introduced for children ± CP & then Conor involved in this Now writing up therapy etc for PHD
	Aware of children in hospital ± CP. Doctors not as aware of metabolic / respiratory difficulties & not taken into consideration in treatment
	With Conor not long before this episode – appeared to be doing well. In touch with family over week of illness & appeared to be well enough hydrated. until went into hospital. Ms Scotson interpretation of illness in CAH

GH 7655

CLINICAL NOTES

CH 334505
MSTR CONOR MITCHELL
[redacted]
12/10/87
Male
[redacted]
SHSSB
MD/OP CONSULTANT

DATE/TIME

11/5/03 8AM.

No change in state overnight. Episode of oozing from (L) subclavian line site. Settled c pressure.
Some movement of lowe limbs noted to N on light touch.
Mother felt one eyelid - fluttered x1.

Presently maintained on
DDAVP 2 mcg iV 8. 2hrly if urine >60mls/c
Adrenaline 1.5 mls/hr.
Cprofen 200 mg BD.
Ceftriaxone 1.6 gm nocte.
Acyclovir 250 mg TID.

Fluids.
~~Full main~~ Normal Saline + KCl = 47 mls/hr.
Drugs.
If urinary output >20mls/hr replaced by N/2 Saline.

O/E. Temp 37°C. (needs warming blanket to ward
Pulse 130
BP 90/50 mmHg
Pupils - unreactive. (R) pupil irregular in shape (oval). Dilated.

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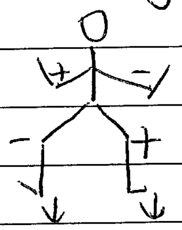
-ve Doll's.
-ve Corneal. -ve gag.
Reflexes.



No response to deep pain with upper or lower limbs
With light touch some withdrawal of legs +/or flickering of toes

Imp Neurological position unchanged. No ~~valunt~~ Voluntary movements noted during examination.

Plan - FBP | U+E | Coag - Sent this AM. ~~noted Coag~~
- Continuing with present fluid ~~previously given~~ management previously
- G'mother to obtain a.a supplementation for mor
- ~~Mon/father~~ Discussion with mother to update situation.

[signature]
(BOTHWELL)

GH 7655

WNC 762

THE ROYAL BELFAST HOSPITAL FOR SICK CHILDREN
BELFAST BT12 6BE

CLINICAL NOTES

CH 334505
MSTR CONOR MITCHELL
[redacted]
ND/OP

13/10/87
Male
[redacted]
SHSSB
CONSULTANT

DATE/TIME

The cause of the original illness is not totally clear probable viral infection.

Conor seems to have had multiple tonic seizures & then a cardio/respiratory arrest which seems to have been due to acute brain stem compression 2° cerebral ?swelling ?HTE.

CATS Reviewed & discussed c Dr Lewis as per his note.

Talked to grandmother who feels that Conor got a lot of fluid in CAN & that medical input was inadequate. She feels he had at least 12 major shattering attacks & sound like tonic seizures & after his face became increasingly puffy & he became more lethargic, pale & acute deterioration.

I reviewed my opinion c her & said I felt it very unlikely Conor would recover from the illness as the signs are of

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DATE/TIME	CLINICAL NOTES
	Severe + likely irreversible brain damage. We are not sure of the exact fluid administration in CATH.
	Mum is keen to try an 'amino acid' mixture which is to arrive tomorrow. D/w Dr Loan – we will need to review contents but it seems unlikely we would object.
	(Dr Loan will contact CATH to discuss fluids) [signature]
11.05.03	
0320	Asked to see
	Ooze ++ from (L) subclavian line site.
	Occurred following turn.
	BP noted to surge momentarily at time of ooze
	Approx 5-10mls on bedclothes.
	Pressure applied to site
	HR steady + unchanged @ 135 bpm
	Non-invasive BP steady in 90/50 mmHg
	After pressure for 5-10mins no further ooze
	* Observe closely
	Monitor BP + HR closely
	If any further ooze call me urgently
	Adrenaline weaned to 1.5mls/hr (1/ from 2) [signature]
	(...) SHO

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BELFAST BT12 6BE

CLINICAL NOTES

[redacted]

MD/DP

12/12/02
Male
[redacted]
SHSSB
CONSULTANT

DATE/TIME

- To inform Coronor of case & further decisions re postmortem at Coroner's request
- mother wishes to have Coron's corneae donated

028 90 728202

12/5/03 Discussed case c Coronor → for coronor's case
As issue with CAH postmorten can be carried out in RBHSC To discuss c Dr Thornton
Phoned transplant co-ordinator re corneal donation
In view of probable initial viral illness unsure as to whether

12/5/03 Discussed c D. THORNTON
Willing to perform postmorten but in view of neuro-pathology suggested neuropathologist & could co-ordinated PM together will speak to HeM
Spoke with coronor's office again & they have already spoken to Dr Heron who was agreed to perform PM
PM scheduled for 2 pm tomorrow

Δ brainstem dysfunction with widespread cerebral oedema 2° to probable ISCH hypoxic-ischaemic event

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DATE/TIME	CLINICAL NOTES
12/5/03	Discussed transplant team unfortunately corneae not suitable as initial presentation of viral illness This was explained to family (BOTHWELL)

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