

NAME OF CHILD: Adam Strain

Name: Sebastian Lucas

Title: Professor

Present position and institution:

Emeritus Professor of Clinical Histopathology (as from 1st April 2012)

Consultant pathologist, Guy's & St Thomas' NHS Foundation Trust

Previous position and institution:

King's College London School of Medicine

St Thomas' Hospital, London SE1

Membership of Advisory Panels and Committees:

Royal College of Pathologists' autopsy committees

Central Pathology Assessor for Confidential Enquiry into Maternal Death (UK)

Ministry of Justice Coroner reform committees

Quondam pathology clinical coordinator for National Confidential Enquiry into Patient Outcome and Death (NCEPOD)

etc

Previous Statements, Depositions and Reports:

N/A

OFFICIAL USE:

List of reports attached:

Ref:	Date:	
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Particular areas of interest:

Infectious diseases, including HIV/AIDS, leprosy, tuberculosis

Maternal mortality clinical pathology

Sickle cell disease pathology

Bariatric surgery complications

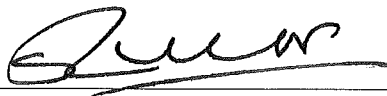
Cardiac pathology

Autopsy governance, training & examinations

Reform of medico-legal system in UK

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

Signed:



Dated:

10/4/2012

Statement of Truth

I understand that my duty as an expert is to provide evidence for the benefit of the Inquiry and not for any individual party or parties, on the matters within my expertise. I believe that I have complied with that duty and confirm that I will continue to do so.

I confirm that I have made clear which facts and matters referred to in my report(s) are within my own knowledge and which are not. Those that are within my own knowledge I confirm to be true. The opinions I have expressed represent my true and complete professional opinions on the matters to which I refer, having studied all the relevant documents supplied to me.

I confirm that I have no conflict of interest of any kind, other than any disclosed in my report(s). I do not consider that any interest that I have disclosed affects my suitability as an expert witness on any issue on which I have given evidence. I undertake to advise the Inquiry if there is any change in circumstances that affects the above. I have no personal interest in supporting any particular point of view.

I understand that I may be called to give evidence.

Signed:

A handwritten signature in black ink, appearing to read 'S. Lucas', with a long horizontal stroke underneath.

Date: 10th April 2012

Professor Sebastian Lucas
Dept of Histopathology
St Thomas' Hospital
London SE1, UK

The Belfast Inquiry - re the death ADAM STRAIN

This is preliminary Pathology report. I have yet to see the full documents, and specifically I do not have the CV of Dr A Armour. Thus some of the questions posed in the Brief for Pathologist cannot be addressed.

Documents available

- The autopsy report by Dr Alison Armour (F. No 46,728; 29th Nov 1995)
- Witness statements 012/1, 012/2, by Dr Armour
- Brief for expert on paediatric pathology
- Statement 011-025-125, dated 8th Dec 1995 by ?
- Deposition of Dr Armour (handwritten + transcription) 18th June 1996.

COMMENT ON THE AUTOPSY AND ITS PERFORMANCE

In my opinion, the autopsy was performed competently, and achieved a diagnosis which, from the evidence in all the documents, appears to be the most likely to explain the death. With one specific exception – see below – it is internally consistent, and given the clinical and laboratory information presented, it provides good support for the main conclusion: death from cerebral oedema due to hyponatraemia during transplant operation for congenital obstructive uropathy. I abbreviate the cause of death listing, since in my opinion, the pathologist should not be interpreting the peri-operative events in such a complex case (ie ‘dilutional’ should have been omitted).

The ‘impaired cerebral perfusion’ (from purportedly a ligated neck vein) is contentious. The autopsy description of the ligature apparently found in the left neck is sub-optimal, since it was not then and has not since become clear whether or not there really was a ligature that obstructed the venous outflow of the left internal jugular vein. This lack of clarity is an important criticism of the autopsy and the report.

The report clearly states, in several places, that there was no cerebral venous thrombosis. The histology description of the brain does not mention venous thrombosis (and I believe it would have been obvious were it present).

Considering the limited range of pathogeneses for a peri-operative massive brain insult that led to failure to wake up and CT-diagnosed cerebral swelling at the cessation of the operation, I consider the hyponatraemia aetiology well founded (and supported by a timely low blood sodium measurement); and no alternative diagnosis seems evident from the information. I have personally seen at least one death from acute cerebral oedema caused by hyponatraemia (in adults, not children).

The heart was removed before autopsy for transplantation. Presumably the clinical data of the peri- and post-operative course indicated no abnormality of the heart function, and thus it was considered very unlikely that pathological examination would reveal significant pathology. In the context of current practice in London, this removal would not take place in a case that would be regarded as high profile: the unexpected post-operative death of a young child in hospital. For certainty (ie exclusion of cardiac disease), it would be examined at autopsy.

Other criticisms, not relating directly to ascertainment of cause of death:

A second criticism is the omission of histopathological investigation of why the transplanted kidney had infarcted. Were the renal artery and/or vein obstructed? This is not an important matter in determining the cause of death; but it is important for the renal transplant programme to know why the transplant procedure itself failed.

A third criticism concerns the weight of the brain, which is uncertain. However, we know that it was swollen (CT scan) from the end of the operation. And do we know whether the mortuary organ weight scales were accurate?

The fourth criticism relates to the abundant non-pathology information provided in the autopsy report. There is, in my view, too much – in the context of this complicated case. The pathologist's role is to determine the pathology causing death, and the clinical information and fluid balance data included – obviously second hand – would be better omitted. In London practice, the coroner would almost certainly not want these data, given that HMC would be getting several clinician reports to prepare for the inquest. He/she would wish the pathologist to comment on the clinical stories presented in evidence, but in a complicated case like this that would come after their delivery, not before.

Overall, in comparison with many of the coronial autopsy reports which I regularly review and others (in 2005) which were reviewed in detail by NCEPOD (see below), this report I would grade as 'good'. It addressed the central issue and produced a coherent answer.

Caveats:

I have not seen the other expert's reports which – reportedly – criticise the performance of the autopsy and its conclusions. I have not seen the histopathology of the brain samples taken.

COMMENT ON THE BROADER ISSUES OF THE ROLE OF THE CORONIAL AUTOPSY IN MEDICAL PRACTICE

In 2006, the National Confidential Enquiry into Patient Outcome and Death (NCEPOD) published its report into the E&W coronial system: "The Coroner's Autopsy: Do We Deserve Better?" I developed this study, chaired the discussions, and drafted most of the report. Prof Jack Crane was a member of the expert advisory group for the study. It can be downloaded at:

<http://www.ncepod.org.uk/2006.htm>

It examined one month (in 2005) of coronial autopsies across the UK (including NI) – excluding only homicide autopsies – to determine how well the autopsy reports were written, and implicitly how well the autopsies were done. The reports were reviewed by a panel of pathologists and coroners. Broadly the conclusions were:

1. One quarter of the autopsy reports (and the autopsies) were performed badly. Some were so appalling that they merited the equivalent of reporting the pathologist to the GMC for bad clinical practice.
2. In one fifth of cases, the review panel did not believe the stated cause of death (ie internal inconsistency of scenario of death, gross +/- histological/ toxicological findings, and conclusions).
3. Paediatric autopsies were performed better than adult – reflecting increasing specialisation in autopsy practice
4. There was overall poor communication between coroners and pathologists at the time of autopsy
5. The purpose of the coronial autopsy is unclear, and there is no consistent approach taken by all coroners (ie they all differ in what they think it is for).

The public tend to regard coronial (medico-legal) autopsies as being of intrinsically high standard, because of their name. The reality is different. In the decade or so since I have taken an interest in the governance aspects of coronial autopsies, I have accumulated a large amount of information on what goes on, in London and UK generally.

There is a huge variation in practice quality – as reflected in the NCEPOD report. In an unacceptable proportion of cases, in my view (and I am not alone), pathologists do not necessarily perform what should be their major role when examining a dead body: to address and answer (if possible) the question(s) raised by a death. They too often go through the motions of an anatomical dissection to produce a quick answer which may or may not relate to what actually happened to result in the death of the person. The consequences include wrong causes of death (affecting national statistics), incorrect information to families on what happened, and – often – inappropriate grounds for civil actions against doctors and health centres.

The three main drivers for this approach are:

1. The coroners' attitude to the autopsy (the purpose). See the NCEPOD report for the detailed range of potential purposes: from merely excluding homicide or unnatural death, to producing an excellent comprehensive report that could be the basis of a case report in a journal. The Coroner Act 1988 does not statutorily require a quality, true diagnosis; it requires a diagnosis that can enable the disposal of the dead and the relevant documentation. The s19 (standard) coronial autopsy is specifically targeted with providing a diagnosis that enables the coroner to dispense with an inquest. IE there is an in-built bias to producing natural cause death diagnoses, and – given the absence of

an unnatural scenario – no requirement to produce the true natural diagnosis, which may be more complicated. Hardly an encouragement to do things well.

2. The remuneration scales for coronial autopsies (s19 and s20). This is historically and currently so poor, that it is hardly surprising that pathologists, who may depend on this income stream, wish to cut and run quickly so as to get through as many cases in as short a time as possible.
3. The indifference (until very recently) of the higher medical regulatory bodies to what happens during coronial autopsies, since – by definition – they are outwith the National Health Service. They are done as a private contract between coroner and medical practitioner, and are not covered by NHS rules, guidelines and protocols. They do – presumably – come within the general standards of medical practice enunciated by the GMC, but that organisation has only taken notice of bad practice since 2006.

The Royal College of Pathologists (RCPATH) is a professional standards body, not a disciplinary body. It has produced Guidelines on Autopsy Practice (2002 – on the web site) and updates for specific scenarios (2005-2010), but these are guidelines only, not mandatory performance standards. Historically it has ignored autopsy practice until recently, preferring to ignore problems in the coronial autopsy system and concentrate on diagnostic biopsy standards. I led the RCPATH committee that produced these Guidelines; and am involved in their re-writing to accommodate recent developments in consented and coronial autopsy practice (this is difficult since we still do not know which sections of the Coroner & Justice Act 2009 are going to be implemented).

On the subject of the training and supervision of non-consultant level pathologists (like Dr Armour), it is only in this millennium that curricula and protocols have been developed that address such issues (mainly from the RCPATH).

Up to the mid-1900s at least, training was entirely apprenticeship and/or self-taught by experience. Personally, I started performing autopsies, including coronial, in 1975, with a professor showing me how he did one, me doing the next – and thereon I was on my own. Advice was available to solve diagnostic problems, but not formal training or mentoring. I was put on the coroner's pathology list within a few months, and carried on learning on the job. Local and national training days or sessions concerned with autopsy affairs were non-existent or rare then.

That has all changed. Training is now more rigorously managed, and trainees are allowed much less opportunity to complete cases themselves and present evidence in coroners' courts. In 1995, my recollection is that trainees were expected to get on with the case load, asking for help if they felt they were out of their depth.

To put Dr Armour's performance in 1995 into some of the context of what could and should have been done, I need her CV of training, examinations passed, jobs and work up to that point.

Consultation about pathological findings with colleagues. This is variable – then and now – with no guidelines beyond the injunction to seek advice when necessary. The RCPATH 2002 Guidelines do not indicate the need to list colleagues consulted, nor what they actually said.

Overview for the Inquiry.

There are aspects of this specific case that can be used as support for recommendations on improving the practice of medico-legal autopsy work nationally.

1. Better documentation of what was seen grossly (ie the ligature business, the transplant kidney blood vessels, organ weights – though note that many pathologists believe that many of the latter are not important beyond indicating that the organ was actually looked at)
2. More precise indication of which professionals were involved in the autopsy and post-autopsy analysis.
3. More careful consideration of how much clinical material to incorporate and to discuss in the report. Many coroners prefer the pathologists to include no clinical history and no clinico-pathological discussion in their autopsy reports; just state the findings and the cause of death where possible.

But to focus on these aspects is to miss the elephant in the room about coronial autopsy practice (and Jack Crane and I constantly iterate this). There is no governance, no standard of quality demanded by coroners, no obligatory linkage with feedback of autopsy findings with pre-mortem clinical practice, and no agreed level of investigations for particular scenarios of death. Coronial autopsy practice has, essentially, operated on a different planet from the less common and better audited consented/hospital autopsy work.

The Brodrick Report (1971 – one of many reviews of the UK coronial service that have periodically taken place and been ignored by governments) recommended that medico-legal autopsy work should statutorily be brought within the NHS. I could not agree more, since that would force up standards, and make the coronial autopsy more fit for purpose (whatever that is eventually declared to be).

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1st April 2012