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Key Words

Shaken Baby Syndrome; Dr Norman Guthkelch; Child abuse; Miscarriages of Justice; Medical Criminology.

Integrity in Science: The Case of Dr Norman Guthkelch, ‘Shaken Baby Syndrome’ and Miscarriages of Justice

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“I am frankly quite disturbed that what I intended as a friendly suggestion for avoiding injury to children has become an excuse for imprisoning innocent parents.” Dr Norman Guthkelch. (Luttner, 2013).

Abstract

The paper documents how and why, Britain’s first Paediatric Neurosurgeon, Dr Norman Guthkelch who wrote the seminal paper, from which the concept of Shaken Baby Syndrome [SBS] originated, became aware of how the concept was being deployed to imprison innocent parents and caregivers and honours the principled stand that he took in objecting to the unjust purposes to which his work was being applied.

The paper focuses on problems within the concept of Shaken Baby Syndrome and its variants, which Dr Guthkelch has chosen to emphasise. These include the epistemological and unscientific practices that are implicit in the concept of SBS; the failure to properly advise relevant parties that SBS and its variants are simply hypotheses; the incorporation of the discourse into harsh, unjust and punitive practice such as in the imprisonment of the innocent; and uncivil conduct towards those who critique the SBS discourse.

Introduction

Britain’s first Paediatric Neurosurgeon, Dr Norman Guthkelch, wrote the seminal paper, ‘Infantile Subdural Haematoma and Its Relationship to Whiplash Injury’ published in the *British Medical Journal* in 1971, from which the concept of Shaken Baby Syndrome [SBS] originated (Guthkelch, 1971). He worked for many decades in the British National Health Service and then moved to the Pittsburgh Children’s Hospital in the US in the 1970’s.

Now in his 90’s, he has become deeply concerned over how his work is being used (Brennan, & Castille, 2012). The discourse of Shaken Baby Syndrome stands accused of “circular reasoning, selection bias, imprecise case definition, unsystematic review publications, [and] conclusions that overstep the data” (Lantz, 2004b). Moreover, it has been substantially linked to miscarriages of justice (Sperling, 2014; Tuerheimer, 2009, 2011; 2014).

Problems with SBS

The science behind SBS Dr Norman Guthkelch says is “greatly premature and sufficiently invalid.” (Bisaro, 2013). SBS is merely an hypothesis (Guthkelch, 2012:207; Sperling, 2012: 248). “There is nothing wrong in advancing such hypotheses; this is how medicine and science progress. It is wrong, however, to fail to advise parents and courts when these are simply hypotheses, not proven medical or scientific facts, or to attack those who point out

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problems with these hypotheses or who advance alternatives.” (Guthkelch, 2012:207). Of the original article he says, if he had known that it would be used as “the whip with which innocent mothers would be beaten”, he would not have written it (Guthkelch in Bisaro, 2013).

However he does not believe that his thinking has changed. Rather, it is others who have misused his ideas in developing the concept of SBS. He objects to the concept of Shaken Baby Syndrome because in contrast to normal practice or the scientific method, a cause for the symptoms is inbuilt into the name, pre-empting the enquiry that ought to determine the cause of the symptoms. “You are presuming what you think you are setting out to prove.” (Guthkelch in Luttner, 2014a).

Furthermore, “the appellation shaken baby syndrome (SBS) asserts a unique etiology (shaking). It also implies intent since it is difficult to ‘accidentally’ shake a baby. A newer term, abusive head trauma (AHT), implies both mechanism (trauma) and intent (abusive)” (Guthkelch, 2012:202). The problem needs to be reconceptualised so that we can “investigate causation without appearing to assume that we already know the answer” (Guthkelch, 2012:202).

What Dr Guthkelch asserted in his 1971 article is that shaking could harm infants by causing retinal haemorrhages and bleeding in the brain. “Since minor trauma may cause disproportionate harm to infants, it is appropriate to advise parents and caretakers not to shake babies, just as it is wise to advise them not to drop babies or to place them in positions from which they could fall or in which siblings or objects could fall on them.” However, it does not follow “that one can infer shaking (or any other form of abuse) from a finding of retino-dural hemorrhage in infancy.” (Guthkelch, 2012:203). Similarly explaining this vitally important point, Squier (2014:248) has stated, “the SBS/AHT controversy is not about whether infants can be damaged or killed by violent shaking or abuse; of course they can. The real controversy is over whether shaking or abuse may reliably be inferred from specific findings, classically, subdural and retinal hemorrhage with encephalopathy (the triad).” The triad of symptoms - retinal haemorrhages, subdural haemorrhages and ischaemic encephalopathy - has been presented as being pathognomic or diagnostic of SBS. In other words, the triad was thought to be “exclusively characteristic—of SBS” (Tuerkheimer, 2009:4) implying that abuse is the only possible cause.

The critical point then is that shaking *may* cause bleeding behind the eyes or in the brain, but the existence of this type of bleeding does not prove that the baby was shaken, since it has now been established that there can be numerous causes of this of type of bleeding, other than shaking (Donohoe, 2003; Hymel *et al*, 2002; Lantz, 2004a; Plunkett, 2001; Findley *et al*, 2012; Luttner, 2014b).

Dr Guthkelch became aware of the uses to which his work was being put when he was approached by Law Professor Carrie Sperling from the Arizona Justice Project and asked to review the case of Drayton Witt, a young father who had been convicted of murdering his baby son, based on allegations of shaking (Sperling, 2012:248; Brennan, & Castille, 2012). At the first meeting, Dr Guthkelch corrected Professor Sperling’s use of the term theory to describe SBS. He pointed out to her that it was not a theory, merely an hypothesis. At that point she

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realised, “There was never sufficient evidence for this hypothesis of shaking to become a theory” (Sperling, 2012:248).

Examining the medical records of baby Steven Witt, Dr Guthkelch concluded that the diagnosis of Shaken Baby Syndrome was inappropriate. The child had a pre-existing medical condition that could fully explain why he died. He went on to proclaim, ‘I wouldn’t hang a cat on the evidence of shaking’ (National Registry of Exoneration, 2012; Brennan, & Castille, 2012).

Dr Guthkelch is concerned that aspects of the Shaken Baby Syndrome concept are “open to serious doubt.” His concerns, together with the evidence of six other experts, led to Drayton Witt’s exoneration in 2012 (National Registry of Exoneration, 2012).

After the Drayton Witt case, Professor Sperling went on to make Dr Guthkelch aware of the extent to which parents were being wrongly accused of killing their babies through shaking. Other cases were reviewed in which it was similarly found that the child had a pre-existing medical condition that provided the cause of death (Luttner, 2014). Indeed, a review “of cases where the alleged assailant has continued to proclaim his/her innocence”, revealed a “high proportion of those in which there was a significant history of previous illness or of abnormalities of structure and function of the nervous system, suggesting that the problem was natural or congenital, rather than abusive.” It is particularly disturbing to note that “these matters were hardly, if at all, considered in the medical reports” (Guthkelch, 2012:204).

The likely extent of the problem of miscarriages of justice that are linked to SBS is indeed a cause for grave concern. Tuerkheimer (2009:1) asserts that “New scientific research has cast doubt on the forensic significance of this triad, thereby undermining the foundations of thousands of SBS convictions”. Because convictions have been based on faulty medico-science, “a sizeable portion of the universe of defendants convicted of SBS-based crimes is, in all likelihood, factually innocent. Even more certainly, a far greater number of defendants among this group were wrongfully convicted” (Tuerkheimer, 2009:22). In the US, at least 19 cases relying solely on SBS have been overturned in recent years (Sperling, 2014).

The stakes are particularly high as Dr Guthkelch has pointed out, “In a case of measles, if you get the diagnosis wrong, in seven days' time it really doesn't matter because it's cleared up anyhow. If you get the diagnosis of fatal shaken baby syndrome wrong, potentially someone's life will be terminated” (Shapiro, 2011).

Dr Guthkelch started to write to express his concerns about SBS, at first informally in his ‘swan song’ for the Innocence Project at Medill University (Guthkelch, 2012a) and then expressing his ideas more formally (Guthkelch, 2012b).

“I realized that what I had described was being made into a completely different disease,” Dr Guthkelch said. “We’ve assumed the cause of shaken-baby syndrome on the basis of a few cases.” The sample size of his original observations was too small to support the generalised conclusions that are being made in SBS allegations (Bisaro, 2013).

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About his original paper Dr Guthkelch has said, “But I truly regretted ever having written it, because people are in jail on the basis of what they claim is my paper, when in fact it is nothing like it.” (Bisaro, 2013).

Together with 35 other international experts, Dr Guthkelch has now signed an open letter expressing deep concern over the links between Shaken Baby claims and Miscarriages of Justice. (Wrennall *et al*, 2015). The experts from a wide range of fields including medicine, child protection, psychology, epidemiology, biomechanics, physics, engineering, research, medical journalism, law, social work and criminology have signed the open letter to draw attention to the problem.

They state that the construct of what is commonly known as Shaken Baby Syndrome [SBS] is not backed by solid science. It has variously morphed into Shaken Impact Injury, and other similar variants, but it has never been scientifically validated.

The letter states that “ in many instances the evidence of the prosecution experts alleging death or serious injury from SBS is demonstrably flawed. The scientific basis for the assertion that these injuries are the consequence of deliberately inflicted violent shaking is highly contentious.”

It is important to point out that “The scientific and academic literature shows that the construct of SBS is open to significant critique. SBS is lacking in scientifically-conducted validation and forensic rigour. To date, the scientific research which has been conducted, casts considerable doubt on the SBS construct. Moreover, while this diagnosis continues to be used, babies are denied the investigations they need to establish the correct cause, treatment and prevention of recurrence, of their symptoms and signs.”

The experts who signed the letter also point out that “the SBS hypothesis does not have the undivided support of the relevant professional community, an essential consideration in the assessment of expert testimony.” Despite the lack of substance, claims that a baby has been shaken can result in draconian consequences in the Criminal and Family courts. People found by either type of court to have abused children can be forcibly and permanently separated from their children and “will be unlikely ever again to be allowed to care for their own or anyone else’s children”.

Conclusion

The signatories to the letter are concerned that “many courts are making insufficiently informed and consequentially, frequently wrong decisions with dire and chronic consequences for parties who may well have done nothing wrong.” They call for sensible debate about SBS in the courts, which they claim in many cases is currently being suppressed.

It is inspiring when a scientist expresses the integrity to defend his discoveries against improper use. Einstein was one such scientist. He spent much of the latter part of his life campaigning against the application of the theory of relativity to the development of the atomic bomb. Dr Guthkelch is another example of what science can be at its best. He intended his work to save lives, not to destroy them and he has spent the latter part of his life working to keep alive the integrity of this vision. I write this paper in intense admiration of the principled,

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courageous and enlightened example that this man represents. He stands among the best that our civilisation can produce.

In his humility and civility he simply says, “I want to do what I can to straighten this out before I die”, though sadly he doesn’t believe that he will “live to see the end of it” (Luttner, 2013). His example will cast a shining light, long into what he hopes will be a more just future.

The letter, together with the list of signatures, is here:

Wrennall, L. Bache, B. Pragnell, C. *et al* 2015 Open Letter on Shaken Baby Syndrome and Courts: A False and Flawed Premise, *Argument & Critique*, Received Jan. Published Feb.
<http://www.argumentcritique.com/open-letter-on-sbs.html>

References

Balko, R. 2014 ‘Shaken baby syndrome’ and the flawed science in our criminal courts, *The Washington Post*, 21 Feb.

<http://www.washingtonpost.com/news/the-watch/wp/2014/02/21/shaken-baby-syndrome-and-the-flawed-science-in-our-criminal-courts/>

Bisaro, A. 2013 Some researchers of landmark shaken-baby syndrome studies question the diagnosis, Monkey Business, *Medill Innocence Project*, 12 Dec.

<http://www.medilljusticeproject.org/2013/12/12/monkey-business/>

Brennan, K. & Castille, N. 2012 Setting the Record Straight, *Medill Innocence Project*, Medill Northwestern University, 7 Sept.

<http://www.medilljusticeproject.org/2012/09/07/setting-the-record-straight-2/>

Donohoe, M. 2003 Evidence-Based Medicine and Shaken Baby Syndrome, Part I: Literature Review, 1966–1998, 24 *American Journal of Forensic Medicine & Pathology*, 24;3;239-42.

http://journals.lww.com/amjforensicmedicine/Citation/2003/09000/Evidence_Based_Medicine_and_Shaken_Baby_Syndrome_3.aspx

Eversole, S. 2013 Birmingham Defense Lawyers Caution Against a Rush to Judgement in Shaken Baby Cases, *Birmingham Criminal Defence Blog*, 9 May.

<http://www.birminghamcriminaldefenceblog.com/2013/05/articles/alabama-criminal-law/birmingham-defense-lawyers-caution-against-a-rush-to-judgement-in-shaken-baby-cases/>

Findley, K. A. Barnes, P. D. Moran, D. A. & Squier, W. 2012 Shaken Baby Syndrome, Abusive Head Trauma and Actual Innocence: Getting it Right, *Houston Journal of Health Law and Policy*, Research paper number 1195.

http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2048374

Geddes, J.F. Tasker, R.C. Hackshaw, A.K. *et al* 2003 Dural haemorrhage in non-traumatic infant deaths: does it explain the bleeding in ‘shaken baby syndrome?’ *Neuropathology and Applied Neurobiology*, 29:14 –22.

<http://onlinelibrary.wiley.com/doi/10.1046/j.1365-2990.2003.00434.x/abstract>
<http://onlinelibrary.wiley.com/doi/10.1046/j.1365-2990.2003.00434.x/abstract>

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Geddes, J. F. & Plunkett J. 2004 The Evidence Base for Shaken Baby Syndrome, *BMJ*, 328:719-20.

<http://www.bmj.com/content/328/7442/719>

Guthkelch, N. 1971 Infantile Subdural Haematoma and Its Relationship to Whiplash Injury, *The British Medical Journal*, 11;430–431. Download on:

<http://www.npr.org/2011/06/29/137471992/rethinking-shaken-baby-syndrome>

Guthkelch, A. N. 2012a Problems of Infant Retino-subdural Hemorrhage and Cerebral Edema with Minimal External Injury, on ‘Swan Song’ Doctor’s ‘Final Reflection’ on Shaken-Baby Syndrome Controversy, Medill Innocence Project, 11 Sept.

<http://www.medilljusticeproject.org/2012/09/11/swan-song/>

Guthkelch, N. 2012b Problems of Infant Retino-Dural Hemorrhage With Minimal External Injury, *The Houston Journal of Health Law and Policy*, 12; 201–208.

<http://www.law.uh.edu/hjhlp/issues.html>

Hymel K. et al 2002 Intracranial Hemorrhage and Rebleeding in Suspected Victims of Abusive Head Trauma: Addressing the Forensic Controversies, *Child Maltreatment*, 7;4;329-348.

<http://cmx.sagepub.com/content/7/4/329.abstract>

Lantz, P. 2004a Perimacular Retinal Folds from Childhood Head Trauma, *BMJ*, 328;754.

<http://www.bmj.com/content/328/7442/754>

Lantz, P. 2004b Letter to the Editor, The Evidence Base for Shaken Baby Syndrome: Response to Reece *et al* from 41 Physicians and Scientists, *BMJ*, 329;741.

<http://www.bmj.com/content/329/7468/741.4>

Levin, A. 2011 At least half of all parents tried over shaken baby syndrome have been wrongly convicted, expert warns, *Daily Mail*, 1 May.

<http://www.dailymail.co.uk/femail/article-1382290/At-half-parents-tried-shaken-baby-syndrome-wrongly-convicted-expert-warns.html#ixzz1L8oRa4Ww>

Luttner, S. 2013 Dr. Norman Guthkelch, Still on the Medical Frontier, *Reporting on Health*, USC University of Southern California, 22 Feb.

<http://www.reportingonhealth.org/2013/02/22/dr-norman-guthkelch-still-medical-frontier>

Luttner, S. 2014a Conversations With Dr. A. Norman Guthkelch.

<http://onsbs.com/2014/08/20/conversations-with-dr-a-norman-guthkelch/>

Luttner, S. 2014b Shaken Baby Syndrome: Inadequate Logic, Unvalidated Theory, Insufficient Science, *Argument & Critique*. Inaugural edition.

<http://www.argumentcritique.com/publications.html>

Luttner, S. & Jones, L. 2012 Perspectives on the Twelfth International Conference on Shaken Baby Syndrome/Abusive Head Trauma, *Video Diaries*, 17 Oct.

<http://www.medilljusticeproject.org/2012/10/16/video-diaries/>

Argument & Critique

McGrath, M. 2012 Medill Innocence Project Examines Shaken-Baby Syndrome Cases Nationwide, *Medill Innocence Project*, 4 Sept.

<http://www.medilljusticeproject.org/2012/09/04/medill-innocence-project-examines-shaken-baby-syndrome-cases-nationwide-2/>

National Registry of Exoneration 2012 *Drayton Witt*, University of Michigan.

<http://www.law.umich.edu/special/exoneration/pages/casedetail.aspx?caseid=4043>

Plunkett, J. 2001 Fatal Pediatric Head Injuries Caused by Short-Distance Falls, *American Journal of Forensic Medicine & Pathology*, 22;1;1.

<http://journals.lww.com/amjforensicmedicine/toc/2001/03000>

Shapiro, J. *et al* 2011 The Child Cases: Guilty Until Proved Innocent, *NPR/ ProPublica/ Frontline PBS*, 28 June.

<http://www.npr.org/2011/06/28/137454415/the-child-cases-guilty-until-proven-innocent>

Shapiro, J. 2011 Rethinking Shaken Baby Syndrome, *NPR*, 29 June.

<http://www.npr.org/2011/06/29/137471992/rethinking-shaken-baby-syndrome>

Shapiro, J. 2012 Post Mortem, *NPR/ProPublica/Frontline PBS*, Journalism centre on children and families, Philip Merrill College of Journalism, University of Maryland.

<http://journalismcenter.org/when-a-child-dies/post-mortem.html>

Sperling, C. 2010 *Priming Legal Negotiations Through Written Demands*, 60 CATH. U. L. REV. 107, 114.

Sperling, C. 2012 in Findley, K. *et al* 2012 Symposium: Examining Shaken Baby Syndrome Convictions in Light of New Medical Scientific Research, *Oklahoma City New Law Review*, Summer;37;2;245-251.

Sperling, C. 2014 *The Wisconsin Innocence Project*.

https://www.facebook.com/permalink.php?id=307384256041024&story_fbid=666475386798574

Squier, W. 2014 “Shaken baby syndrome” and forensic pathology, *Forensic Science, Medicine, and Pathology*, June;10;2;248-250.

http://www.pubfacts.com/fulltext_frame.php?PMID=24469888&title=

Sweeney, J. 2008 Doubts about shaken baby syndrome, *Panorama*, BBC, 8 March.

<http://news.bbc.co.uk/1/hi/uk/7283998.stm>

Tuerkheimer, D. 2009 The Next Innocence Project: Shaken Baby Syndrome and the Criminal Courts, *Washington University Law Review*, Vol. 87.

http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1354659

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Tuerkheimer, D. 2010 Criminal Justice at a Crossroads: Science-Dependent Prosecution and the Problem of Epistemic Contingency, *62 Alabama Law Review* (forthcoming 2010) (Draft, March 2010).

http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1579394

Tuerkheimer, D. 2011 Science-Dependent Prosecution and the Problem of Epistemic Contingency: A Study of Shaken Baby Syndrome, *Alabama Law Review*, 62, 513.

http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1579394

Tuerkheimer, D. 2014, *Flawed Convictions: "Shaken Baby Syndrome" and the Inertia of Injustice*, Oxford University Press USA.

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