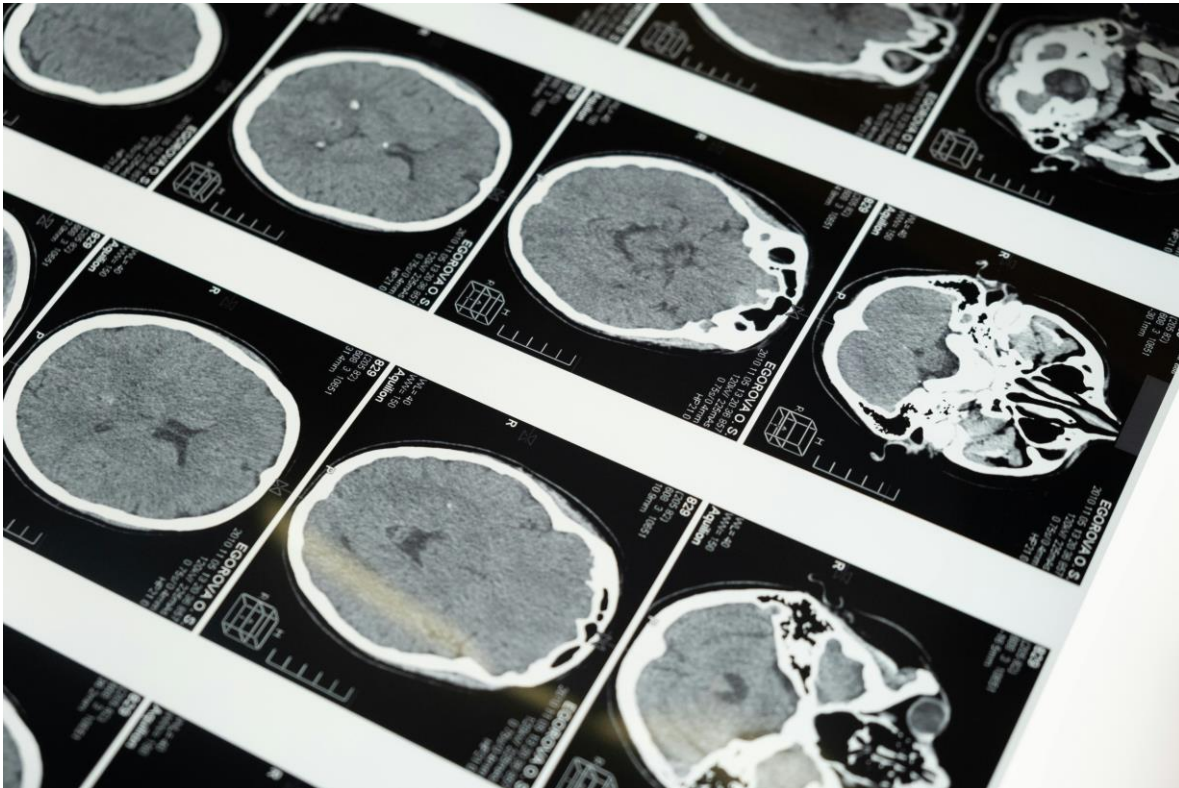


Shaken Baby Syndrome: Medico-Legal Controversies and Recent Case Developments in Australia



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Work so far

Acknowledge A/Prof James Tibballs – Department of Paediatrics, University of Melbourne

Thank you – Prof Ian Freckelton AO KC – comments and advice as we revised our paper

James Tibballs and Neera Bhatia, ‘Medical and Legal Uncertainties and Controversies in “Shaken Baby Syndrome” or Infant “Abusive Head Trauma’ (2024) 31(1) *Journal of Law and Medicine* 151-184

Neera Bhatia and James Tibballs, Invited presenters: ‘Legal and Medical Uncertainties and Controversies in Shaken Baby Syndrome’, Symposium on Shaken Baby Syndrome, Expert Evidence and the Australian Criminal Justice System, June 27, 2024, Victorian State Library

Ongoing projects: working with scholars in law, medicine, and forensic medicine



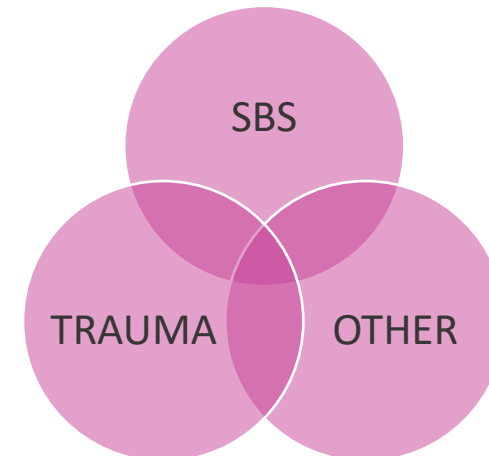
What is Shaken Baby Syndrome (SBS)

Shaken Baby Syndrome or Abusive Head Trauma = Type of severe brain injury that occurs when a baby/infant is violently shaken (or hit)

Cases of SBS are most often reported or considered in the **absence** of any witnesses or confession by the accused (tends to be a caregiver/ last person to have been with the child before symptoms arise)

Medico-Legal controversy is the clinical overlap

SBS is diagnosed when trauma **and other** conditions are excluded



The Triad of injuries

SBS Diagnosis: “**The Triad**” of injuries (or Triad of Clinical Signs)

1. Subdural Subdural haemorrhage – bleeding under the dural layer of the brain
2. Retinal haemorrhages – bleeding in the retinas of the eyes
3. Wide range of Encephalopathies – swelling in the brain

Mechanism: Vigorous shaking +/- head trauma (AHT) causes acceleration-deceleration of the brain, resulting in shearing forces which rupture “bridging veins” crossing the subdural space



Why is SBS controversial?

A diagnosis of SBS – can have significant implications for families, the accused, and others involved

Varying medical and legal opinions on how SBS should be diagnosed:

1. Purely medical diagnosis
2. Relied on as evidence per se of SBS
3. Whether expert opinion alone should determine the outcome of a criminal or civil case

Heavy reliance on medical opinion **BUT** if there are any other possible causes of the “triad” then SBS should not be concluded unless beyond reasonable doubt.

Circular Reasoning?

Roygardner et al. (2020) – several inconsistent legal outcomes in SBS cases with very similar facts



Why is SBS controversial?

‘Few pediatric diagnoses engender as much debate as, in part because of the ***social and legal consequences*** of the diagnosis. The diagnosis can result in children ***being removed from their homes, parents losing their parental rights,*** and ***adults being imprisoned for their actions.*** Controversy is fuelled because the mechanisms and resultant injuries of ***accidental and abusive head injury overlap,*** the abuse is rarely witnessed, an accurate history of trauma is rarely offered by the perpetrator, and there is ***no single or simple test to determine the accuracy of the diagnosis,*** and the ***legal consequences of the diagnosis can be so significant***’

American Academy of Pediatrics, 2009



Evidence of SBS

Studies across engineering, pathology and science = no study has been able to unequivocally conclude that the “triad” is pathognomic to SBS

Cannot “actually” shake a baby to know how much force would be required to cause SBS

The closest alternative = biofidelic models (represent human infants) but have been inaccurate

Is it “junk science”?

Several studies and reviews and reviews have been conducted of cases to test the hypothesis of the “triad”

Systematic Review undertaken by Swedish Agency for Health Technology Assessment (SBU) – reviewed >3,000 abstracts; >1,000 texts
... Reduced to 30

Concluded “insufficient evidence of which to assess the diagnostic accuracy of the “triad”



“Mimics”

Major and Minor Head Trauma

Cardiopulmonary Resuscitation

Intracranial Hypertension

Coagulopathies

Metabolic conditions

Exacerbation of pre-existing subdural haematoma



Can “minor” accidental trauma cause the triad of injury ?

Falls from low heights (<1 metre)

From a carer’s arms; Off household furniture; From a sitting / standing position

Aoki et al (1984) “ Infantile acute subdural haematoma... “26 infants (average age 8 mths) fell from sitting / standing / carried position / low furniture onto soft surface. All had subdural haematoma + retinal haemorrhage + convulsions – 2 died

Burrows et (2015) “ Head injury from falls in children younger than 6 years ”

1775 UK national serial study of head CT scans, of whom

233 infants, median age 0.3 yrs (IQR 1.1): fall from carer’s arms most injurious

21 (9%) skull fracture

15 (6%) intracranial injury +/- skull fracture (1 died)

Concluded: accidental fall from low height can cause retinal haemorrhage + epidural haemorrhage



LAW, HEALTH
AND SOCIETY



Inconsistent Legal Outcomes

The cause of a “triad” of signs cannot be reliably determined = shaken baby syndrome **and** accidental trauma share **same signs**

Often, the opinion of the physicians may determine the cause

Roygardner et al (2020) “Scoping Review”

Several inconsistent legal outcomes in shaken baby cases – even with similar facts = disparate case verdicts and stark sentencing determinations. Ranging from acquittals; probation; to life imprisonment

Findley et al (2019) “Feigned Consensus”

USA - Courts are beginning to recognise the uncertainty and controversy that surrounds shaken baby syndrome – where it has been diagnosed as the sole cause of head trauma = overturned several convictions



Media Attention

Father found not guilty of fatal assault on newborn

By Tara Cossetto
Updated June 18, 2024 - 4:45pm, first published 4:41pm



A Victorian man been found not guilty of killing his newborn son. (James Ross/AAP PHOTOS)

A Victorian father has been found not guilty of causing the death of his 24-day-old baby.

The Supreme Court jury delivered its verdict against the man, whose identity is suppressed, on Tuesday afternoon after deliberating for four days.

The man let out a big sigh and dropped his head in relief after the foreman confirmed the jury's decision.

Prosecutors had alleged he violently assaulted the newborn in a moment of frustration - shaking him, striking him, or both after he awoke crying and screaming about midnight.

The man initially told paramedics the baby went limp in his arms after his partner went to grab a bottle of milk.

This was published 3 years ago

OPINION Critique of baby shaking prosecutions raises troubling response

Greg Barns
May 25, 2021 - 5:30am

Save Share A A A

The response of Victorian forensic scientists to a critique of their methods in assessing so-called baby shaking cases shows that there is some disagreement among those in this field. Perhaps this ought to be the trigger for a much-needed independent inquiry and review of the use of forensic science and evidence in the criminal justice system. The decision of attorneys-general across Australia to [abandon such a review](#), commissioned in 2019, should be reversed immediately.

As *The Age* has revealed, an article by Dr Chris Brook, published in 2019 in the *Australian Journal of Forensic Sciences*, took issue with a 2018 conviction of Joby Rowe, who was [jailed for nine years](#) for the homicide of his three-month-



Exclusive National Crime

This was published 3 years ago

Top scientists question basis for Victoria's baby shaking prosecutions

Chris Vedelago
May 18, 2021 - 5:00am

Save Share A A A

Top Victorian pathologists have raised doubts about the scientific evidence relied on to jail a number of men for shaking babies to death, raising serious questions about whether their convictions were sound.

Three men jailed in Victoria since 2018 for child homicide or recklessly causing serious injury have launched or are about to launch appeals that challenge the basis of shaken baby syndrome, a collection of three injuries said to point to abuse as the cause of harm to infants in their care.

The existence of the syndrome has been called into question globally but remains widely accepted by Victorian police, forensic specialists and child abuse experts.



Shaken baby syndrome on trial: Judges to re-examine homicide conviction

Chris Vedelago
August 20, 2021 - 6:08pm

Save Share A A A

Victoria's highest court has flagged serious concerns about the scientific diagnosis known as "shaken baby syndrome", which has been used to prosecute and jail a number of young men for child homicide and abuse in recent years.

The Court of Appeal has ordered a hearing into the reliability of the 50-year-old forensic theory as part of an appeal by Jesse Vinaccia, 28, who was jailed in 2019 for killing his girlfriend's 3½-month-old son.



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Cases concerning SBS

USA: State v Audrey Edmunds 746 NW 2d 590 (Wis Ct App, 2008)

UK: R v Henderson; R v Butler [2010] 2 Cr App Rep 24; [2010 EWCA Crim 1269

Australia:

- Vinaccia v The Queen (2022) 70 VR 36; [2022] VSCA 107

- R v Rowe [2018] VSC 490

- R v Lee [2001] ACTSC 133

- DPP v DCT [2024] VSC – This is a recent SBS case. The Defence Counsel relied on/cited our JLM paper.

Decided by a jury - accused found not guilty of SBS



Who can give an opinion in a SBS Case?

EXPERT OPINION - Evidence Act 2008 (Vic) – s.76: An opinion is not admissible

s.79: “If a person has specialised knowledge based on the person’s training, study or experience, the opinion rule does not apply to evidence of an opinion of that person that is wholly or substantially based on that knowledge”

- The expert must possess specialised training
- That knowledge must be based on specialised training, study or experience and;
- The opinion must be based on that specialised knowledge

A nexus criterion - the opinion that is offered must be wholly or substantially based on the expert’s claimed specialised knowledge



The role of opinion in SBS cases and experts

Court can rule expert opinion as inadmissible

The meaning of “specialised knowledge has been explored at length (See, Honeysett v The Queen (2014) 253 CLR 122

Admissibility of expert evidence - Depends on proper disclosure and proof of the factual basis of the “opinion”

Lower correlation between facts proved and assumed = less weight given to expert opinion

Facts **proven** and facts **assumed** are substantially different = opinion **carries little weight**

SBS CASES: Low scientific level/low quality of scientific evidence = likely to be prejudicial rather than probative and call into question the admissibility of evidence

Scientific evidence = unreliable

Expert opinion should not be **heavily** relied on



The role of confessions

Confessions obtained in police custody or during legal investigations - unreliable

Criticism of the use of “admitted or confessed cases” as a reference standard

Rossant and Brook (2022): Anonymous study

RESPONSES: 150 people suspected/accused of SBS between 2004-2021

118 unique SBS case responses were analysed

All stated no SBS had occurred

97 involved police interrogation =77 respondents stated police presented SBS diagnosis as “absolutely certain or irrefutable”

45 respondents were informed that a confession to abuse would “let justice be more lenient”

42 respondents also said they were told confessing would allow the other parent to regain custody of the child

11 respondents had made a voluntary confession to “spare the partner to assist with the child to be reunited with the other parent



Conclusions

- SBS is complex and requires careful clinical and legal consideration - morally, clinically and legally fraught
- Medical evidence – can be of a very low level = Unreliable MEDICAL EVIDENCE IS LOW- VERY LOW QUALITY
- Expert opinion should not be “exclusively/heavily” relied on
- Role of confessions needs to be carefully considered
- - We make other recommendations in our paper - James Tibballs and Neera Bhatia, ‘Medical and Legal Uncertainties and Controversies in “Shaken Baby Syndrome” or Infant “Abusive Head Trauma’ (2024) 31(1) *Journal of Law and Medicine* 151-184

