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Case No: LN20C00996

IN THE HIGH COURT OF JUSTICE
FAMILY DIVISION

Royal Courts of Justice
Strand, London, WC2A 2LL

Date: 25/07/2022

Before :

MRS JUSTICE LIEVEN

- -

Between :

A LOCAL AUTHORITY — **Applicant**

and

AA — **First Respondent**

and

BB — **Second Respondent**

and

Y
(through her Children's Guardian) — **Third Respondent**

- -
- -

Mr Andrew Norton QC and Ms Judy Claxton (instructed by **the local authority**) for the **Applicant**
Ms Anne Williams (instructed by **Bird & Co Solicitors LLP**) for the **First Respondent**
Ms Vanessa Marshall QC and Ms Susannah Johnson (instructed by **Sills & Betteridge Solicitors**) for the **Second Respondent**
Ms Claire Wills-Goldingham QC and Ms Naomi Madderson (instructed by **Pepperells Solicitors**) for the **Third Respondent**

Hearing dates: **2-12 November 2021 and 22 & 24 June 2022**

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Approved Judgment

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MRS JUSTICE LIEVEN

This judgment is being handed down in private on 25 July 2022.

The Judge hereby gives leave for it to be reported.

The judgment is being distributed on the strict understanding that in any report no person other than the advocates, the solicitors instructing them, or persons (other than the parties, members of their extended families and their children) identified by name in the judgment itself, may be identified by name or location. In particular the anonymity of the children and the adult members of their family must be strictly preserved. If reported, it shall be the duty of the Law Reporters to anonymise this judgment.

Mrs Justice Lieven DBE :

1. This judgment follows a fact finding hearing held over 8 days in November 2021 and 2 additional days in June 2022 concerning the causation of injury to Y ('Y'), a girl, who was 9 months old on 7th October 2020, the date of the relevant event.

2. The Mother is AA ('Mother') and the Father, BB ('Father'). The Local Authority ('LA') alleges in its Threshold Document that the Father caused Y's injuries by shaking her. On 7 October 2020 the Father called an ambulance saying that Y had suffered a fall from the bed and was in need of urgent medical assistance. On later examination it was discovered that she had subdural haemorrhage ('SDH') and retinal haemorrhages ('RH'). The LA assert that these injuries followed an Abusive Head Trauma ('AHT'). The Father, supported by the Mother, says that he did not shake Y in any way and that the injury followed a fall from the bed.

3. The LA was represented by Andrew Norton QC and Judy Claxton, the Father was represented by Vanessa Marshall QC and Susannah Johnson, the Mother was represented by Anne Williams and the Children's Guardian was represented by Claire Wills-Goldingham QC and Naomi Madderson. I am very grateful to all of them for their assistance in this complex case.

4. I heard evidence at the November 2021 hearing from the health visitor, Dr Saunders (neuroradiologist); Professor Fielder (ophthalmologist); Professor Vloebergs (neurosurgeon) and Dr Hobbs (paediatrician). I had written evidence from Dr Keenan (haematologist). I also heard evidence from the Mother and the Father. I heard closing submissions in November 2021.

5. Unfortunately, shortly after the close of the November hearing, the Court received a letter sent by the Medical Defence Union stating that Dr Saunders had become ill and she felt that the Court could no longer rely on her evidence. Given the criticality of the neuroradiological evidence in this case it was felt by all parties, and I agreed, that a new neuroradiologist should be instructed. Dr Hogarth was then instructed to take on this role and the Court heard his evidence on 24 June, and further submissions from the parties on 27 June.

6. The case was distinguished from many such cases by the fact that I was presented with a very large number of academic papers related to the cause of SDHs and RHs in infants, and a possible linkage between head size and propensity to have SDH and RH.

7. There was a sharp divergence in view at the November hearing between Dr Saunders, who concluded that Y's injuries were caused by a low level fall, and Dr Hobbs and Professor Vloebergs who were of the clear view that they resulted from a shaking injury. Professor Fielder also concluded that a shaking injury was the most likely cause but was somewhat more guarded in his conclusions. Dr Hogarth's opinion was that the injuries were consistent with a shaking injury, but he did not rule out the possibility that they were caused by a short fall. He too referred me to some academic papers.

8. It will be necessary in this judgment for me to refer to a number of the academic papers, but I make it entirely clear that, not being a medical expert, I can only comment on these papers in a forensic but not medical manner.

The Facts

9. Y was born in January 2020. She was born at 33 weeks' gestation and spent 3 weeks in the neonatal unit at Hospital. She was discharged on 27 January 2020. There was one day in hospital when she needed supplementary oxygen because of respiratory distress. When she was discharged she was feeding well and putting on weight.

Head circumference

10. There is a major issue around Y's head circumference ('HC') and whether it was growing normally. This is relevant as to whether Y could be described as having macrocephaly, and thus fall within some of the growing literature which relates head size to the likelihood of brain injuries in infants following short falls. Having heard the evidence it became clear that macrocephaly has no one precise definition, and there are no clear criteria within the literature that relates particular head size to particular outcomes. However, the general issue of whether Y's head size, or its pattern of growth was unusual, is relevant to the academic literature on the causation and likelihood of such injuries.

11. The health visitor recorded Y's HC in the Red Book on the relevant chart, which is a World Health Organisation ('WHO') produced chart. Dr Hobbs replotted the agreed weights on the WHO-UK chart, which is based on UK babies, on the basis that he considered this a more useful and appropriate chart for UK babies. I will refer to both charts where relevant but use the general WHO chart first.

12. The HC (and weight) have to be put onto the chart at the relevant week but then, because H was pre-term, are tracked back to what would have been her gestational date.

13. When Y was born, her HC was 29cm (9-25th centile). On 27 January it had grown to 31.5cm (25-50th centile). By 24 February it was 35.8cm (91-98th centile). On 16 March it was 36.9cm (91st centile) and 2 April, 37.8cm (75th centile). The health visitor had raised a concern because Y's head had grown rapidly, and the GP therefore said it should be measured every 2 weeks. From 14 April the parents took over measuring Y's head because of the Covid epidemic and the fact that health visitors stopped visiting the home. The Mother was shown how to measure the head, and I have no reason to believe her measurements were not accurate.

14. Y remained on the 75th centile to 26 May when it was 41.1 (75th – 91st centile). On 7 July it was 42.5cm (91st centile). This was the last measurement before the injury in October.

15. Y's weight at birth was 2kg (50th centile). She then dropped to the 9th centile, as is quite normal. By 16 March it was 3.52kg (25th centile) and by 7 July it was 7.54kg (91st centile). Ms Marshall points out that Y was on a milk supplement, which may in part explain her significant weight gain.

16. Dr Hobbs' argues that the growth in Y's HC up to July 2020 was entirely normal. It followed her weight gain and her somewhat larger than average head was probably just a genetic inheritance, the Mother being reported to have a larger than normal head. He says the most important point is that her head growth did not accelerate before October.

17. On 8 October, the day after the injury, Y's HC was measured at 46.3cm (98-99.6th centile). It has remained thereafter at the 99.6th centile. There is a major disagreement as to whether this growth was as a result of the injury, or whether her head was likely to have been growing disproportionately between July and October, i.e. before the injury occurred. I will return to that when considering the evidence.

The Incident

18. The Mother went back to work in early August 2020. Initially working 2½ days, but then increasing this to full time in early September. The Father looked after Y most of the time with the Grandmother having her for 2 afternoons. All the evidence suggests that Y was a happy, content, much loved and easy to look after child. She slept through the night from about 3 months.

19. Y had just started to learn to roll in the week or two before 7 October. I was shown a video dated 5 October when Y is rolling on the floor. She is at the stage where she can roll more than once, but only with breaks in between. The video shows her rolling four times. I note that rolling on a hard surface, i.e. here a floor, is easier than rolling on a bed.

20. On 7 October the Mother left for work at 7.29am (she has a device which records precise times) as she normally did on Wednesdays. From this point onwards we only have the Father's account of what happened other than two photos he sent the Mother. I set out here his account.

21. The Father said Y woke up at about her normal time of around 7.30am. She had slept through the night, as she usually did. He gave her breakfast in her high chair and then played with her on the floor. She had a nap around 10.00am, again as was normal. He sent the Mother photos of Y at 9.30am and 10.36am and these show Y well and happy. He remembers that she was asleep at 10.36am when he sent the photo. After she woke up, he did a short workout whilst she was sitting in a Bumbo chair. They then went upstairs and he put her in her cot whilst he had a shower.

22. He said when he came out of the shower she was "grunty grumbling". There was some debate in cross examination about Y's mood at this point, but the Father was clear she was not distressed or crying, just wanting to be taken out of the cot and to be entertained.

23. He took her into the parents' bedroom and laid her on the bed, facing across the bed with her head towards the window. The bedroom is relatively small with a window on the right, a king-size double bed and a gap to a chest of drawers on the left. There is a wardrobe to the bottom left of the bed, beside the door. The distance between the bed and floor is 65cm.

24. The Father took some shorts out of the chest of drawers and then moved to find a shirt in the wardrobe. He said he had his back turned for a very short time, he then heard a thud and turned to see Y lying on the floor on her back, perpendicular to the bed with her feet towards the bed and her head towards the chest of drawers. She was immediately very distressed and crying. He initially tried to comfort her on the floor, being worried that he might hurt her if he moved her. However, she was so distressed he picked her up and held her, supporting her head and back, whilst she screamed then arched her back and gasped for breath. He said he was concerned she was fitting.

25. He then took her downstairs and called for an ambulance. He said that it was only around two minutes between her having the accident and getting downstairs to call the ambulance.

26. The 999 call commences at 12.36pm. I have listened to the whole of that call and have a transcript. I will refer to it below. It is clear from the tape that Y was becoming very drowsy and the Father was struggling to keep her awake. The Father says on the call "It's my own fault why did I turn my back on her?"

27. The ambulance arrived shortly thereafter and Y, with the Father, were taken to Hospital. They were seen in the Emergency Department ('ED'). There is a handwritten record from the admission which says "father was looking after child. She was on the bed. Crawled to the side and fell on the ground which is a wooden carpeted floor. Cried for a few minutes. Father feed [sic] her immediately, she vomited…." It appears from the record that both Mother and Father were with the doctor when the account was given. Both parents say that Y could not crawl, and the Father did not say that Y had crawled off the bed. The Father also denies saying that Y vomited at home. The first time she vomited was at the triage in the Hospital. The Mother says there was no sign of Y having vomited earlier when they got home.

28. Y was checked over and the doctor discharged her home. However, when she got home she vomited again and became very drowsy. The Mother said it was projectile vomiting. The parents had been told to return to hospital if she vomited and they therefore took her back and she was admitted overnight.

29. Y had a CT scan which showed the SDH. There were then further tests and examinations, and the concern was raised about Non Accidental Injury ('NAI'). H was transferred to a second hospital on 8 October. An MRI scan was undertaken on 9 October. An ophthalmological examination was undertaken on 12 October and this revealed bilateral RHs.

30. The consultant paediatrician at the second hospital provided a safeguarding report. Y was discharged on 16 October. The parents agreed that Y should live at the home of the grandfather and his wife, and the parents moved in with them. A written agreement was entered into in relation to the parents being supervised with Y. There is no suggestion that the parents have not entirely abided by the agreement and have been fully co-operative at all times with the LA and the processes that have been undertaken.

31. Y has been seen on a number of occasions since discharge. She is developing normally and achieving all the relevant milestones. The RHs, when last examined, appeared to be resolving.

32. The police were informed about the matter. They spoke to the Father on 12 October and gathered the clinical reports. The Father gave a very short written statement denying assault. Neither the Father nor the Mother have been further interviewed and the police have taken no further action.

33. The LA undertook a parenting assessment of both parents in early 2021. This was entirely positive. Neither parent has any issue with alcohol or drugs and no criminal convictions. Nor do they have any recorded mental health issues. There is no suggestion of any domestic abuse. There is extended family support in the area from the

Grandmother who regularly looked after Y. This is a family where as far as anyone can tell there are no external stress or risk factors.

Y's injuries

34. The parties agreed a list of the injuries which were found and I set these out here:

Medical Finding	**Opinions expressed**
Bilateral blot haemorrhages and bilateral retinal haemorrhages.	Dr Fielder, Ophthalmologist – Y had these injuries [E603]. All experts agree presence of bilateral haemorrhages. Dr Hogarth agrees these injuries were present.
Bilateral optic disc/papilledema.	Dr Fielder – Y did have papilledema. Both seen radiologically and retcam imaging [E604]. Dr Hogarth agrees these injuries were present.
Bilateral thin film subdural haematogromas/effusions.	Professor Vloeberghs agrees she had these injuries [E605]. Dr Hobbs agrees they are present [E606]. Dr Hogarth states there are very thin subdural fluid collections over both cerebral hemispheres which have the same signal intensity as CSF. They **probably** present traumatic subdural effusions. No evidence of neo-membrane formation or compartmentalization.
Enlarged extra axial spaces.	Professor Vloeberghs – there are visible extra axial spaces [E607]. Dr Hogarth states there is no abnormal widening of the extra-cerebral cerebrospinal fluid spaces.
Subarachnoid cyst.	All experts agree this is not relevant. Dr Hogarth concurs – "This is of no clinical significance and is not related to the subdural fluid collections."

Medical Finding	Opinions expressed
Raised intracranial pressure.	

The academic papers

35. I have been provided with well over 40 academic papers, some by the Father's team, some by Dr Saunders and some by Dr Hobbs. For the June 2022 hearing Dr Hogarth provided some further papers I will only refer to the ones principally relied upon by Dr Saunders, Dr Hobbs and Dr Hogarth on the central issues of the likelihood of a short fall causing injuries such as Y's. I appreciate that a judge is not in a particularly good position to assess such papers and decide what weight to place upon them. However, the content of those papers lie at the heart of the medical evidence in this case, and in my view I have no choice but to consider them.

36. There are a number of difficulties with research in the field of infant head injuries and its causation. The most obvious is that it is not possible to carry out any empirical research, which leaves the data very difficult to analyse in a wholly objective and comparative manner. There are relatively few cases where there is unequivocal evidence, such as CCTV footage, that proves whether the infant was shaken or suffered a short fall. Even in cases where an adult has "confessed" to the shaking, some authors cast doubt on whether those confessions can always be relied upon.

37. In relation to the case studies in the papers relied upon by Dr Saunders, there are often problems with the detail of the studies and the degree to which the cases are self-selected. Many of the case studies relate to cases where parents are seeking to establish that the injuries were not caused by AHT and thus can be criticised as being self-selecting. Further, it is very difficult to be confident that when a case is categorised as not being subject to abuse, the reader can be sure that is actually the case.

38. Dr Hobbs referred to many of the papers which cast doubt on the conclusion of AHT being produced in the context of US "defence" experts in what appears to be a rather polarised field in US litigation. I understand this concern, although I note that a number of the reports that Dr Saunders relied upon came from outside that context. However, taking Dr Hobbs' concern into account, I do have particular regard to the Consensus Statement, which I will refer to below.

39. Equally, many of the papers Dr Hobbs relies upon quote statistics as to the likelihood of SDHs resulting from AHT, which themselves rely on the analysis that SDHs with

RHs are necessarily the result of an AHT. There is therefore a degree to which such papers may become a self-fulfilling prophecy, as Professor Fielder agreed when I put this point to him.

40. Dr Saunders said there was a growing number of studies which cast doubt on a conventional analysis that when a case had SDH and RHs, the probable cause was AHT. I only refer below to the ones that appear to me to be most critical. I note that Professor Fielder also referred to there being a growing body of literature on the issue, as did Dr Hogarth.

41. The starting point is *Subdural hematomas in infants with benign enlargement of the subarachnoid spaces are not pathognomonic for child abuse* (McNeeley, Atkinson et al 2008). This paper refers to 7 patients with Benign Enlargement of the Subarachnoid Spaces ('BESS') and subdural hematomas. The paper argues that infants with BESS can have subdural hematomas either spontaneously or as a result of accidental trauma. The authors propose that infants with BESS have an increased susceptibility for subdural haematomas. I do not understand in this context that there is any difference between subdural hematoma and SDH.

42. In *Childhood Falls with Occipital Impacts* (Atkinson et al 2017) 8 cases were described with witnessed accounts of infants striking their heads after a short fall. They all had SDHs and RHs. Five out of 7 of the children had a head circumference greater than 90th centile. The authors posit that all the cases mimicked findings with AHT and if there had not been witnesses to the falls there would have been a high suspicion of abuse. I note two difficulties with this paper, firstly the height of the fall is not clearly recorded, and secondly there is reference to falls onto "hard surfaces" – although none of the infants had bruising on their heads.

43. One of the papers which led Dr Saunders to revisit her conclusions was *Is External hydrocephalus a possible differential diagnosis when child abuse is suspected?* (Scheller and Wester 2021). The papers considered 28 cases of infants (20 in the USA and 8 in Norway) suspected of having been violently shaken. 81% of the cases had HC above the 90th centile and 18 above the 97th centile. The authors describe what they call Benign Idiopathic External Hydrocephalus ('BIEH'). The following extract is key:

> *"Nearly identical epidemiological features have been noted for the neuro-paediatric condition "Benign/idiopathic external hydrocephalus, a condition that is also known as "Benign enlargement of the subarachnoid spaces (BESS), and "Benign familial macrocephaly"…*
>
> *BEH develops during infancy; most of these children are born with a close-to-normal head circumference that increases rapidly during the first months of life, and there is a marked male preponderance as well.*
>
> …
>
> *This extra-axial fluid, which possibly is a reminiscent of birth-related SDH/subdural hygroma, is usually chronic with small volumes of fresh blood, a key feature in the radiological diagnosis of SBS/AHT, but also a common complication to BEH.*

Several authors have pointed to the risk that a spontaneously occurring SDH in infants with BEH can be misdiagnosed as SBS/AHT."

44. In *Epidemiology of Benign External Hydrocephalus in Norway – A population based study* (Wiig, Zahl et 2017). The authors described Benign External Hydrocephalus ('BEH') as a rapidly increasing head circumference with characteristic radiological findings of subarachnoid cerebrospinal fluid spaces. At p.39 guideline figures are given for sinocortical width, craniocortical width and interhemispheric distance, that indicate BEH. In terms of head circumference, the authors say that they have used a cut-off of 97.5th centile.

45. Dr Hobbs relied particularly on two papers. The first is *Consensus Statement on abusive head trauma in infants and young children* (Choudhary et al 2018). This paper is particularly important because it is a Consensus Statement produced by neuroradiologists from a very wide range of institutions in different countries and supported by many paediatric and radiological societies. I agree with Dr Hobbs that those factors give it a particular weight. The statement explains that it is seeking to set out the general physician acceptance on specific topics, and to rebut the *"denialism of child abuse [which] has become a significant legal and public health problem",* particularly in the US legal system. The Statement is clear about the validity of AHT as a diagnosis and the need both to avoid a simplistic determination based on the "triad" and the need to exclude "unsubstantiated alternative theories".

46. The Statement is a careful analysis of the consideration that is needed in diagnosing these difficult cases. As I read it, the main thrust of the Statement is to reject any argument that infant shaking cannot cause brain injury. Although that argument may be common in US courtrooms, it certainly was not the position being advanced by the Father's team or Dr Saunders here.

47. The Statement does not reject the relevance of BESS. It says:

> *"Taking only those reports from Table 4, in which the prevalence of BESS has also been documented, a total of 712 cases of BESS were documented, with 38/712 (5.3%) reported to have subdural collection, including 12/712 (1.7%) that were reported to be hemorrhagic in nature. Accidental trauma or abuse was reported in 5/12 (41.7%0 of the subdural collections that were hemorrhagic. Besides, up to 50% of children with BESS and SDH may display concomitant important injuries. Overall subdural collections are uncommonly seen in the setting of BESS and assessment to exclude trauma, including AHT, should be performed in those with hemorrhagic and non-hemorrhagic subdural collections, especially in children younger than 2 years."*

48. In the conclusions it is stated:

> *"4. No single injury is diagnostic of AHT. A compilation of injuries most often including SDH, complex retinal hemorrhage and/or retinoschisis, rib, metaphyseal or other fractures and soft-tissue injury leads to the diagnosis.*

> *5. Each infant suspected of suffering AHT must be further evaluated for other diseases that might present with similar findings. The question to be answered is, "Is there a medical cause to explain the findings or did this child suffer from inflicted injury?"*
>
> *6. … In addition, subdural hematoma is uncommon in the setting of benign enlargement of the subarachnoid space, and when present, AHT should be considered in the differential diagnosis."*

49. The other paper that Dr Hobbs strongly relies upon is *The "New Science" of Abusive Head Trauma* (Lindberg et al 2019) which reviews a number of other papers and seeks to rebut what is described as the "new science" countering allegations of AHT. The paper argues that the evidence that short falls can cause SDH and RH are wrong and not scientifically robust. This paper is undoubtedly important and suggests that SDH and particularly RH resulting from short falls are very much the exception. However, it is notable that the authors do not rule it out.

The medical evidence

50. The medical evidence in this case has been highly contentious. In summary, the initial position was that all the experts instructed concluded that Y's injuries were most likely to be caused by her having been shaken. However, over the course of the Summer 2021 Dr Saunders changed her view and concluded that on the balance of probabilities it was more likely that a short fall caused the injuries. This was her position at the November 2021 hearing.

51. This position was strongly contested by Dr Hobbs and Professor Vloeberghs, and Dr Fielder considered a shaking injury was more likely than a fall, though he was rather less unequivocal than the others.

52. However, as I have explained above, Dr Saunders then became ill, and it was said that reliance could not be placed on her evidence. The letter from the Medical Defence Union says:

> *"Dr Saunders has reviewed her report(s) produced during this period and she is not able to understand or indeed justify her report(s). …."*

I note that this is a generic letter and does not relate specifically to Y's case.

53. Dr Hogarth was then instructed, and he concluded that shaking was more likely to be the cause than a fall, but accepted that a short fall was a possible, although relatively unlikely, cause of the injuries.

54. At the resumed hearing all parties agreed that I could not simply excise Dr Saunders' evidence from the record and wholly ignore it. The agreed position, after some consideration, was that where Dr Saunders' evidence accorded with that of Dr Hogarth, I could continue to rely upon it. Where, however, Dr Hogarth disagreed with Dr Saunders, I should not have regard to her evidence. Ms Williams suggested that it was a matter of weight, but I do not consider this to be correct. In respect of those parts of Dr Saunders' evidence with which Dr Hogarth disagreed, there is now no medical evidence to support her conclusions. I will explain the significance of this below.

55. Dr Saunders' evidence, and the academic papers she relied upon, seemed to me to fall into three parts. She pointed to the literature which suggested that in some cases short falls could cause SDH, and, in a very few cases, RH. Dr Hogarth accepted that this was a possibility, and as such this evidence remains open to consideration by the Court.

56. She argued that Y appeared to have a large, or rapidly expanding, head which was not referrable to the injury she suffered. Dr Saunders referred to academic papers which considered the propensity of young children with large heads to suffer SDHs from short falls.

57. This theory seems to be relatively well accepted for children with BESS, less so with children with BEH and even less so with children who might be viewed as having wide extra-axial spaces. All parties agree that Y does not have BESS. However, a great deal of time at the November hearing was spent trying to determine whether Y had an unusually large and/or expanding head, and whether she had wider than normal extra-axial spaces. In the light of Dr Hogarth's evidence, the question and relevance of whether Y had a large or expanding head remained an issue.

58. However, the third element of Dr Saunders' evidence was that Y had wider than normal extra-axial spaces and this could give rise to a propensity to suffer SDH and possibly RH from short falls. Dr Hogarth's view was that Y did not have wider than normal extra axial spaces, and he did not accept Dr Saunders' evidence in this regard.

Dr Saunders

59. Dr Saunders is an Honorary Consultant Paediatric Neuroradiologist at St George's Hospital and an Associate Professor at the Institute of Child Health, London University. She spent 13 years up to 2014 as a consultant neuroradiologist at Great Ormond Street NHS Trust. She currently works as a locum Consultant Paediatric Radiologist at East Surrey Hospital. Her qualifications are MBBS, MRCP, MD, and FRCR. Her expertise is in the field of the interpretation of diagnostic scans of the brain and spine in children. She has a particular interest in the field of child protection and abuse. Dr Saunders was appointed as an independent expert neuroradiologist.

60. Dr Saunders produced three reports and participated in the experts meeting in September 2021. Her reports are dated 26 April 2021, 12 June 2021 and 15 August 2021. It is correct to record that she changed her view of the likely cause of Y's injuries over the course of her involvement in the case.

61. In her report of 26 April Dr Saunders said that the injuries *"are a very unlikely but not impossible outcome of an impact head injury following a fall from a bed with an impact close to the midline… The injuries Y sustained are a well recognised outcome of a shaking injury".* On 28 May she referred to some of the relevant papers, and said her conclusion remained the same. However, on 12 June, she said that she thought it was most likely the injuries resulted from a fall. However, on 25 June she retracted this position, saying that she now appreciated that Dr Hobbs had made clear that Y had a normal head circumference. She therefore reverted to the view that the most likely cause was a shaking injury.

62. However, her final position in the report of 15 August, at the expert meeting, and in her oral evidence to the court, was that it is likely that Y's injuries were as a result of a fall

from the bed and unlikely that they were a consequence of her being shaken. In her initial report of 12 June Dr Saunders had concluded that it was unlikely that the injuries had resulted from a fall from the bed because such falls usually result in no injury; injuries that do occur usually show scalp swelling or skull fractures; haematomas of the sort shown here are a very rare outcome of falls from a bed; subarachnoid haemorrhages have usually only been seen with falls from a greater height; injuries such as are seen here are a well recognised injury following shaking injuries.

63. Dr Saunders reached her ultimate conclusion having considered a large number of academic papers, including but not limited to those referred to above. She said that she had in part done this because of involvement in another case where there was consideration of BESS and whether there was a shaking injury. Apart from the fact that this other case (where the allegation of shaking was ultimately withdrawn) triggered Dr Saunders' research, it has no further relevance in the present case.

64. The features of the neuroimaging which led Dr Saunders to her ultimate conclusion were as follows. Firstly was her consideration of whether there was an enlarged subarachnoid space. She had initially measured in accordance with two papers on the diagnosis of BESS (Tucker et al 2016 and McNeely et al 2006). She measured Y's spaces for her May report and found that Y did not meet the criteria for BESS. As I have explained above, this part of her evidence can no longer be relied upon because it is not supported by Dr Hogarth.

65. Secondly, Dr Saunders examined from the images the bridging veins across the spaces and said she could see no bleeding from these veins. She said that for a shaking injury one would normally expect to see blood around the bridging veins in the subdural space. She thought there probably was blood from the lesser, emissary veins, but this was less likely to show a shaking injury.

66. Thirdly, Dr Saunders said that in a shaking injury one would normally expect greater amounts of blood in the subdural space, whereas here the major component was CSF with only a tinge of blood.

67. Dr Saunders said that whether Y had "macrocephaly" i.e. a big head, was a matter for the court, but the approach she had taken was if the child's head growth crossed two centile lines that was a relevant factor in the analysis. Dr Saunders questioned whether the expansion of Y's head when measured on 8 October was as a result of the injury and the SDH, as Dr Hobbs and Professor Vloeberghs suggest. The mechanism for a short term head expansion following an injury would be for the sutures to expand (there having been insufficient time for the skull to have expanded after the injury) or possibly for the fontanelle to bulge. However, Dr Saunders said that she did not see any expansion of the sutures on the neuroimaging and there was no evidence of a bulge in Y's fontanelle. Therefore, she believed that most, if not all, of the head expansion (onto the 98-99.6th centile) must have been growth before the injury.

68. She accepted that if Y was on the 71st centile it would be more difficult to proceed with the argument, but she felt that the fact the sutures had not splayed was strong evidence that the head expansion predated the injury. She did not accept Professor Vloebergh's position that whether sutures had splayed was "purely subjective".

69. Dr Saunders accepted that in relation to the retinal haemorrhages she would defer to Professor Fielder. She said that having reviewed the academic papers there was reference to infants having RH, in particular in the Atkinson paper, where the paper suggested that they had suffered short falls and not shaking injuries.

Doctor Hogarth

70. Doctor Hogarth is a consultant neuroradiologist at the Royal Berkshire Hospital. He considered all the papers in the case, including Dr Saunders' earlier reports. Dr Hogarth's opinion was that the subarachnoid spaces were not in any way enlarged. In oral evidence he said that his training was not to measure extra axial lengths but to consider enlargement simply on the basis of observation.

71. He thought the most likely cause of the head injuries was a shaking event, but he did not rule out the possibility of a short fall as the cause, albeit that would be unusual. He said that such a fall "would have a very low probability".

72. However, he said that he could contemplate a short fall cause in this case because of the relatively moderate nature of the injuries. It was of some note that he placed significantly more weight on this aspect of the case, the fact that Y's brain injuries were relatively slight, than had any witness at the first hearing.

Professor Fielder

73. Professor Fielder, FRCP, FRCS, FRCOphth, is a Professor of Ophthalmology at City University London, and was a consultant ophthalmologist for many years. He has held many senior positions in the field and has frequently given evidence. He produced three reports and attended the experts meeting.

74. He found that there were retinal haemorrhages in both eyes and both optic discs were swollen, probably showing papilloedoema, which may have been because intracranial pressure was raised.

75. In the September 2021 experts meeting Professor Fielder said that the features of the RHs were not those of accidental trauma. Y had multiple haemorrhages, some of them very large and extending into the vitreous. He said it would be extremely rare for such injuries to occur from accidental trauma, save of the most extreme kind such as a car crash. He therefore concluded that in his opinion the ophthalmic signs were very suggestive of AHT.

76. Professor Fielder was considerably more open to the relevance of BESS/BEH to infant brain injuries, and therefore to an explanation other than shaking injury, than was either Professor Vloeberghs or Dr Hobbs. He referred to the papers, including Scheller & Wester that reported RHs in association with BESS. However, he added that whether that association was causal is as yet not known. He said that there was no consensus in this area, and it was an area of intense discussion amongst professionals.

77. However, he remained of the view in his oral evidence that Y's injuries were non-accidental and would not have been caused by the fall that was reported by the Father.

Professor Vloeberghs

78. Professor Vloeberghs is a consultant paediatric neurosurgeon at Nottingham University Hospital. He has been involved in many child protection cases and has frequently appeared as an expert witness. He has extensive experience of neuroimaging, although would defer to the neuroradiologist, particularly on MRI scans and timing issues.

79. In his reports, the first experts meeting and the subsequent experts meeting with Dr Hogarth, he was of the clear view that the injuries were indicative of a shaking injury.

80. He agreed with Dr Hobbs that there was no significance in causative terms to the fact that Y's head circumference was on the 99th centile after the incident because he considered this resulted from the haematohygroma resulting from the injuries. He did not consider it mattered whether one could see the sutures splayed because it was not possible to measure them in an objective manner.

81. He did not accept that BESS could cause SDHs or RHs or had any causative role in such injuries. He placed considerable weight on the RHs in reaching his conclusion that Y's injuries resulted from AHT.

82. He also said that there was no evidence that the bridging veins were stretched, even if that had any potential relevance. Ms Marshall put to him that the lack of, or minimal amount of, bleeding from the bridging veins was an indicator against a shaking injury. Professor Vloeberghs said that there was a spectrum of these events, where some children were critically ill and had all the indicators, and other non-critical events, such as happened to Y, where not all the indicators, such as blood from the bridging veins, can be seen.

83. He also did not accept that that subarachnoid spaces were larger than normal and said that the measurements were an arbitrary measure.

84. My understanding of Professor Vloeberghs' evidence was that he did not accept the overall thesis that infants with larger heads (whether defined as BESS or BEH or any other categorisation) were more prone to SDHs from short falls. He was extremely doubtful about much of the literature that Dr Saunders relied upon, and described it as being small and incomplete, and self-selecting, where the full clinical history was not recorded.

Dr Hobbs

85. Dr Hobbs was a consultant paediatrician for many years and is a recognised expert in the paediatric aspects of child protection having worked in this field for 30 years. He has published a number of papers on the topic and has provided expert opinions to a range of national and international bodies. His qualifications include BSc, FRCp and RCPCh. He was designated doctor for child protection in Leeds for many years. Dr Hobbs was instructed to provide a paediatric overview.

86. In his first report Dr Hobbs said:

> *"the combination of subdural, retinal and vitreous haemorrhages is strongly associated with non-accidental head injury with the likely*

mechanism violent shaking of the infant. These findings are not consistent with a fall of around 2 feet from the bed as described by the father."

This has remained his clear opinion throughout these proceedings. In the further experts meeting with Dr Hogarth he said this is a classic case of a shaken baby and *"I don't think that the findings, the symptoms and the signs are at all consistent with a child falling off a bed in the circumstances as described."*

87. In his opinion Y's head circumference followed a normal pattern and gave no cause for concern. He said that her head growth up to July 2020 largely mirrored her weight gain, and she was simply a big baby with a wholly proportionate sized head. He thought it most likely that the increase in head size when measured on 8 October was a consequence of the intracranial haemorrhage she had suffered the previous day. Like Professor Vloeberghs he was not particularly concerned about the lack of evidence that the sutures had splayed.

88. In his report dated 17 May, Dr Hobbs said that there were no head measurements on or above the 91st centile before October. I note that this is not correct on the general WHO chart. However, Dr Hobbs said he believed the UK Growth chart was more appropriate for use given that it was based on UK babies. In any event, he said that the HC was not out of the normal given that it followed Y's weight growth. He said in oral evidence that sometimes infants' heads took some time to catch up with their general growth.

89. Dr Hobbs summarised the reasons for his opinion in his third report dated 21 August 2021 as follows:

"The reasons are:

1. Children including babies do not sustain injuries of this kind from low distance falls from beds. There is published evidence to support this. In a minority of cases if any injury is sustained it would be a bruise/abrasion. Fractures are rare (usually clavicle or skull) but intracranial bleeding and retinal/eye injury are not seen.

2. The pattern of injury (bilateral subdural haemorrhages, retinal and vitreous haemorrhages) is that which is described in abusive head trauma with no signs of impact injury and where shaking is thought to be the most likely mechanism.

3. The issue of whether Y could have moved herself in order to fall from the bed has been touched upon by other experts with an expectation that I would provide an opinion. I have seen the videos of Y provided by her mother including video 9 taken before her injuries in which she demonstrates her efforts at rolling over. However to roll over from the middle of the parents double [bed] to fall off seems unlikely but not impossible.

4. The videos show a healthy normal child prior to her injuries."

90. When it was put to him that some of the academic papers do refer to instances, albeit a small number, where infants do appear to have developed RH after short falls, he was critical of the data in those papers and the weight that could be attached to them.

91. Dr Hobbs said that he had assessed many young children with low level falls, and he did not believe that they could sustain significant injury through that mechanism.

92. It was plain both from the notes of the expert meeting and the oral evidence that Dr Hobbs was deeply frustrated by Dr Saunders' change of view. He made it clear that he felt she should have not changed her position in the absence of new material. He pointed to the fact that she had had all the relevant material when making her original assessment, and evidentially nothing had changed. He was also critical of Dr Saunders for not having referred to a paper she authored in 2017 where she had criticised an earlier paper by Lynoe, which challenged diagnoses of AHT.

93. Dr Hobbs did not accept that a diagnosis of BESS, or BEH if considered different, gave rise to an increased propensity to SDH. Referring to the Consensus Statement (see 45-48) he said that subdural collections are uncommonly seen in the setting of BESS.

94. He also said that Dr Saunders had failed to take into account the RHs which were strongly indicative of a shaking injury.

<u>The Father</u>

95. The Father came across as a calm, careful and, as far as it was possible to tell, honest witness. He was very clear in his account of the morning of 7 October and the details of what he did. He was plainly upset and distressed about what had happened to Y. He expressed great remorse about having left her on the bed and allowing her to injure herself. All the emotions he expressed appeared to me to be wholly appropriate and in keeping with his version of events.

96. He completely denied shaking Y, whether as the initial cause of the injury or after the fall from the bed, or after he picked her up in an attempt to stop her crying. He set out the account I have referred to above and was consistent in relation to that account. He was pressed on how long he had turned his back whilst Y was on the bed and said it was seconds. The fact that he had at one point said "a second" did not in my view show any inconsistency.

97. He was adamant that Y was not distressed when she was in her cot, merely slightly discontented and seeking attention.

<u>The Mother</u>

98. The Mother was not in the house when the incident happened and therefore can give no direct evidence about it. Like the Father, she came across as calm, thoughtful and honest. My sense was that if she had doubted the Father's account, she would have acted to protect Y whatever her loyalty to the Father. She had plainly thought long and carefully about his account and fully accepted it.

99. In the light of the video of Y rolling, I asked the Mother whether she and the Father had discussed the need to be careful now Y had started to roll. In my view the danger of her

rolling off the bed was fairly obvious, but I fully accept that hindsight is a wonderful thing. The Mother then said that she did remember a conversation a week or two earlier with the Father about needing to be careful with Y on the bed. She said this conversation had taken place when all three of them were on the bed, and Y had been moving on the bed. The Father said he only had a very vague recollection of this conversation.

The law

100. The relevant law was agreed between the parties, and what is set out below is the most relevant parts of what was agreed. In *A Local Authority v (1) A Mother (2) A Father (3) L & M (Children, by their Children's Guardian)* [2013] EWHC 1569 (Fam) Baker J set out a useful summary of the legal principles that are relevant in a case such as this:

> *"45. First, the burden of proof lies at all times with the local authority.*
>
> *46. Secondly, the standard of proof is the balance of probabilities.*
>
> *47. Third, findings of fact in these cases must be based on evidence, including inferences that can properly be drawn from the evidence and not on suspicion or speculation. I have borne this principle in mind throughout this hearing.*
>
> *48. Fourthly, when considering cases of suspected child abuse the court must take into account all the evidence and furthermore consider each piece of evidence in the context of all the other evidence. The court invariably surveys a wide canvas. A judge in these difficult cases must have regard to the relevance of each piece of evidence to other evidence and to exercise an overview of the totality of the evidence in order to come to the conclusion whether the case put forward by the local authority has been made out to the appropriate standard of proof.*
>
> *49. Fifthly, amongst the evidence received in this case, as is invariably the case in proceedings involving allegations of non-accidental head injury, is expert medical evidence from a variety of specialists. Whilst appropriate attention must be paid to the opinion of medical experts, those opinions need to be considered in the context of all the other evidence. It is important to remember that the roles of the court and the expert are distinct and it is the court that is in the position to weigh up the expert evidence against its findings on the other evidence. It is the judge who makes the final decision.*
>
> *50. Sixth, cases involving an allegation of non-accidental injury often involve a multi-disciplinary analysis of the medical information conducted by a group of specialists, each bringing their own expertise to bear on the problem. The court must be careful to ensure that each expert keeps within the bounds of their own expertise and defers, where appropriate, to the expertise of others.*
>
> *51. Seventh, the evidence of the parents and any other carers is of the utmost importance. It is essential that the court forms a clear assessment of their credibility and reliability.*

52. Eighth, it is common for witnesses in these cases to tell lies in the course of the investigation and the hearing. The court must be careful to bear in mind that a witness may lie for many reasons, such as shame, misplaced loyalty, panic, fear and distress, and the fact that a witness has lied about some matters does not mean that he or she has lied about everything (see R v Lucas [1981] QB 720).

53. Ninth, as observed by Dame Elizabeth Butler-Sloss P in an earlier case:

"The judge in care proceedings must never forget that today's medical certainty may be discarded by the next generation of experts or that scientific research would throw a light into corners that are at present dark."

54. This principle, inter alia, was drawn from the decision of the Court of Appeal in the criminal case of R v Cannings [2004] EWCA 1 Crim. In that case a mother had been convicted of the murder of her two children who had simply stopped breathing. The mother's two other children had experienced apparent life-threatening events taking a similar form. The Court of Appeal Criminal Division quashed the convictions. There was no evidence other than repeated incidents of breathing having ceased. There was serious disagreement between experts as to the cause of death. There was fresh evidence as to hereditary factors pointing to a possible genetic cause. In those circumstances, the Court of Appeal held that it could not be said that a natural cause could be excluded as a reasonable possible explanation. In the course of his judgment, Judge LJ (as he then was) observed:

"What may be unexplained today may be perfectly well understood tomorrow. Until then, any tendency to dogmatise should be met with an answering challenge."

55. With regard to this latter point, recent case law has emphasised the importance of taking into account, to the extent that it is appropriate in any case, the possibility of the unknown cause. The possibility was articulated by Moses LJ in R v Henderson-Butler and Oyediran [2010] EWCA Crim. 126 at paragraph 1:

"Where the prosecution is able, by advancing an array of experts, to identify a non-accidental injury and the defence can identify no alternative cause, it is tempting to conclude that the prosecution has proved its case. Such a temptation must be resisted. In this, as in so many fields of medicine, the evidence may be insufficient to exclude, beyond reasonable doubt, an unknown cause. As Cannings teaches, even where, on examination of all the evidence, every possible known cause has been excluded, the cause may still remain unknown."

56. In Re R, Care Proceedings Causation [2011] EWHC 1715 (Fam), Hedley J, who had been part of the constitution of the Court of Appeal in

the Henderson case, developed this point further. At paragraph 10, he observed,

"A temptation there described is ever present in Family proceedings too and, in my judgment, should be as firmly resisted there as the courts are required to resist it in criminal law. In other words, there has to be factored into every case which concerns a discrete aetiology giving rise to significant harm, a consideration as to whether the cause is unknown. That affects neither the burden nor the standard of proof. It is simply a factor to be taken into account in deciding whether the causation advanced by the one shouldering the burden of proof is established on the balance of probabilities."

57. Finally, when seeking to identify the perpetrators of non-accidental injuries the test of whether a particular person is in the pool of possible perpetrators is whether there is a likelihood or a real possibility that he or she was the perpetrator. In order to make a finding that a particular person was the perpetrator of non-accidental injury the court must be satisfied on a balance of probabilities. It is always desirable, where possible, for the perpetrator of non-accidental injury to be identified both in the public interest and in the interest of the child, although where it is impossible for a judge to find on the balance of probabilities, for example that Parent A rather than Parent B caused the injury, then neither can be excluded from the pool and the judge should not strain to do so."

101. The propositions set out above by Baker J (as he then was) emerge from a number of cases over the years, but it is not necessary to refer to each of them individually.

102. The findings made by the judge must be based on all the available material, not just the scientific or medical evidence, and all that evidence must be considered in the wider social and emotional context: *A County Council v X, Y and Z (by their Guardian)* [2005] 2 FLR 129. This was expressed as the expert advises and the judge decides in *Re Be (Care: Expert Witnesses)* [1996] 1 FLR 667.

103. In *A Local Authority v K, D and L* [2005] EWHC 144 (Fam), Charles J referred to the important distinction between the role of the judge and the role of the expert [39], saying:

"(a) that the roles of the court and the expert are distinct, and

(b) that it is the court that is in the position to weigh the expert evidence against its findings on the other evidence, and thus for example descriptions of the presentation of a child in the hours or days leading up to his or her collapse, and accounts of events given by carers."

104. These comments were developed by Charles J in a lengthy section in the judgment in *K, D and L*, including a review of the relevant case law in the area. The most relevant passages are as follows:

"[44]… in cases concerning alleged non accidental injury to children properly reasoned expert medical evidence carries considerable weight,

but in assessing and applying it the judge must always remember that he or she is the person who makes the final decision;"

...

"[49]... In a case where the medical evidence is to the effect that the likely cause is non accidental and thus human agency, a court can reach a finding on the totality of the evidence either (a) that on the balance of probability an injury has a natural cause, or is not a non accidental injury, or (b) that a local authority has not established the existence of the threshold to the civil standard of proof ;"

...

63. "I am therefore able to reach a conclusion as to cause of death and injury that is different to, or does not accord with, the conclusion reached by the medical experts as to what they consider is more likely than not to be the cause having regard to the existence of an alternative or alternatives which they regard as reasonable (as opposed to fanciful or simply theoretical) possibilities. In doing so I do not have to reject the reasoning of the medical experts, rather I can accept it but on the basis of the totality of the evidence, my findings thereon and reasoning reach a different overall conclusion."

105. The Court can depart from the view of an expert provided sound reasons are given for doing so *(Re B (Care: Expert Witnesses)* [1996] 1 FLR 670 per Ward LJ). In Lancashire County Council v R and W [2013] EWHC 3064 (Fam), Mostyn J stated: *"....Scientific certainties of a past age are often proved conclusively wrong by later generations: A County Council v M and F [2012] 2 FLR 939 at para [251(iv)]. Today's orthodoxy may become tomorrow's outdated learning: R v Holdsworth [2008] EWCA Crim 971 at para [57]"*

Conclusions

106. The burden of proving their case rests on the LA, but only upon the balance of probabilities. In reaching my conclusion I must look at the totality of the evidence and not focus on one aspect of that evidence to the exclusion of other parts.

107. Absent the medical evidence in this case, I would have no doubt that the Father did not shake Y and therefore did not cause the head injuries found. There are no "red flags" in this case in respect of the Father; there is no history of drug taking, excessive alcohol, domestic abuse or mental health problems. However, the factors against the Father having shaken Y go further than that.

108. Y was an easy contented baby. That is the evidence not just of the parents and the wider family, but of all the photos and videos I have seen, and of the health visitor. Y was a baby who slept well, and both parents say she had slept through the night the day before the injury. I have seen the photos of her that morning appearing happy and smiley. In my view this is important because, although the conventional wisdom is that many people could shake a baby with a momentary loss of control, they are significantly less likely to do so in the middle of the day when there is no reason to believe that the Father

was tired or stressed. The evidence of the Father, backed up by the photos and the Mother's evidence, is that he and Y were having a normal contented morning.

109. Mr Norton has suggested that the Father might have lost control because Y was "grumbling". I have to say I think that this is very unlikely. A parent might lose control with a baby who had been crying for hours or screaming with distress, but absent the red flags referred to above, I do not think it at all likely that the Father would have lost control because Y was somewhat discontented.

110. Next is the Father's demeanour as a witness. He was a calm and, in my view, honest witness. He has been consistent in his account, subject to a minor change from saying he turned his back for "a second" to perhaps a minute. That is the kind of use of language that in my view means nothing. The Father is accepted by the LA to be a loving and caring parent, and the parenting assessment was wholly positive. I find the Father was a wholly believable witness.

111. An important piece of evidence was the 999 call when the Father is palpably distressed and can be heard saying "why did I turn my back". The LA have to argue that this was either a deliberate lie to create a false story, or a deliberate attempt to minimise what had happened. For the Father to have lied in this situation, when he was obviously distressed about Y, would suggest a degree of calculation which seems wholly out of keeping with the Father's presentation in the witness box. Further, if the Father had lied in this situation he would have been potentially harming Y's care by misleading the first responders. This would have not been the action of a loving parent. I think it is extremely unlikely that the Father would have acted in this way.

112. I turn then to the medical evidence. This amounts to findings of retinal haemorrhages and subdural haemorrhages and Y's physical presentation. There were no other physical signs of a shaking injury – no bruises and no fractures and no brain injuries. I fully accept that a shaking injury can take place without these other indicators, but their absence must be a relevant consideration in taking an overview of the evidence.

113. In respect of the RHs and the SDHs, all the experts whose opinions I am now in a position to rely upon say that they were more likely to be caused by a shaking injury rather than a short fall. However, I heard the evidence of Dr Saunders in November and have read the papers to which she referred. Critically Dr Hogarth, although he thinks a shaking injury is more likely than a fall, does accept that a fall is a possibility.

114. I do not accept Dr Hobbs and Professor Vloeberghs' criticism of Dr Saunders for having changed her mind (twice) during the course of these proceedings. Although I understand their frustration, in my view Dr Saunders has done what any expert should do. She kept an open mind and conducted as thorough a review as possible of the literature before reaching her ultimate conclusion. It is obvious that this is a highly contentious field where unhelpfully litigation, particularly in the US, seems to have led to a polarised approach. However, as far as I can tell, and I rely on Dr Saunders for this, there are many reputable and independent experts who are open to the argument that there are cases where infants have suffered both SDH and RH from short falls. That is not in any sense to reject the point that those factors will often if not usually be indicators of AHT - they may well be in the vast majority of cases. But it remains important to acknowledge that there will be outlier, or unusual, cases.

115. This is a case where it is particularly important to bear in mind the various judicial dicta referred to above about considering the unusual or unlikely cause, and not simply following the medical evidence without question. I found Dr Hogarth's evidence very helpful in his appreciation that unlikely events necessarily happen, and there will be outliers to the normal clinical presentation. The academic literature does indicate that there are cases of young children suffering both SDH and (very infrequently) RHs from short falls. I give considerable weight to Professor Fielder's evidence that he has never seen a case where he thought a RH resulted from a short fall. However, the literature does suggest some such cases do exist.

116. Although Y does not appear to have had the indicators of BESS, there is evidence she had an unusually large head before the injury, that it had grown in an unusual manner. The issue of whether Y had widened extra axial spaces has fallen away, Dr Hogarth stating that in his view the images do not support any such finding. However, he accepted that there was no sign of the sutures having splayed on 8 October, which is an indicator that her head was already large before the injury. It is neither possible nor necessary for me to determine the degree to which Y's head circumference (or its growth) may have played a part in her becoming injured from a short fall, but I accept that it has some possible relevance.

117. Ultimately, I have to look at the evidence as a whole. The factors I take into account in concluding that on the balance of probabilities Y was not shaken by the Father are as follows. The lack of any other physical signs of shaking, such as bruising or fractures. The lack of any "red flags" in relation to the Father or the family circumstances. The lack of any evidence of any stress factors on the morning of the incident - the evidence strongly points to this being a normal, happy morning. The Father's demeanour during giving evidence and what he said on the 999 call, which would have involved a deliberate lie or subterfuge which in my view would have been wholly out of character. The fact that there is a body of literature which supports the possibility of infants, usually with larger than normal heads, having SDHs and, in a few cases, RHs after short falls. The evidence of Dr Hogarth that although it is more likely the injury was caused by shaking, given the relatively slight injuries here, he accepts the possibility of a short fall as the cause.

118. For these reasons I conclude that the LA's Threshold document is not proved.