

Dr. Ira N. Adler

- (Preliminary questions based on CV, qualification as an expert)

- Define and establish scope of “Pediatric Radiology”

- Includes diagnosis and treatment of physical child abuse (Battered Child Syndrome).

- Qualify as an expert if “Pediatric Radiology.”

- Are you familiar with what is termed the "Battered Child Syndrome"?
 - Would you explain for us your understanding of that syndrome?

 - Is this a recognized diagnosis in the medical field?

 - Is the Battered Child Syndrome accepted by both the sub-specialties of radiology?

 - What are the common elements of the Battered Child Syndrome?
 - *[injuries in different stages of healing, no explanation or inconsistent explanation for the injuries, nature and location of the injuries allows an*

opinion that they were inflicted by some other person, not accidentally caused]

- When you are in a position of considering whether the Battered Child Syndrome applies to a particular injured child, do you consider all the injuries collectively in reaching that conclusion? Why?
 - ***Conglomeration points to child abuse but could be other things, but this is not one of those things.***
- Are you also familiar with the Shaken Baby Syndrome? Is that a subcategory of Battered Child Syndrome?
- Have you had specific experiences relating to Battered Child Syndrome and Physical Abuse of Children?
 - Would you tell us about your experience and training in that area?
 - Have you diagnosed and/or treated or worked with victims of SBS as a physician?
 - Do you stay current with advancements in the field concerning this particular syndrome as a Pediatric Radiologist?
 - Do you also consult with other physicians as an expert in shaken baby injuries?
- As part of your education, training and experience are you able to identify, merely from Diagnostic Imaging, the mechanism, item, thing or person that cause injuries to children diagnosed with battered child syndrome?
- What parts of an infant's body would you discover injuries that, in your opinion, are associated with having been caused by shaking?
 - Are those diagnostic criteria for the Shaken Baby Syndrome unique to that cause?

- What Diagnostic tools/machines were utilized in evaluating an infant child, such as Ramalle Nay'Shawn Holloway? (*Cat Scan, X-Rays (35 images), scan head and MRI.*)
 - Do you limit the number of exposures to one?
 - Quality, just because it was pressed on the film and not describe or could not see due to quality.
- Where you involved in the case of the infant child, Ramalle Nay'Shawn Holloway?
- How involved?
- Dates:
 - December 25, 2002;
 - April 28, 2003; &
- Personal Contact on September 29, 2005.
- What does a normal work up consist of on December 25, 2002?
 - Explain How done; (Physically with child, etc.)
- Review Skeletal Survey of December 25, 2002;
- Review Head CT
 - Head w/o Contr. @ 7:52 pm with 195 images;
 - What did survey of Head reveal?
 - This the first time you have seen injuries or damage like this to an infant?

(Will go through Summary of Findings in report and use computer images of CT to explain to jury)

 - Acute vs. Chronic;
 - Would you explain for us what causes bleeding within the brain of a child who has been violently shaken?

- How common is subdural or subarachnoid bleeding in a baby or toddler from causes other than inflicted head injury? (Depends on mechanism of injury, but distribution and where the blood is)
- Is subdural or subarachnoid bleeding seen in common falls from small heights?
- What about in auto accidents? Even severe accidents?
- In cases where young children are either killed by shaking or suffer permanent brain damage, does the bleeding within the brain actually cause the child to die?
 - Bleeding is secondary to mechanism and other secondary, edema, can be if there is shift,
- What does cause death or severe brain damage?
- What did survey of the Abdomen reveal?
 - This the first time you have seen injuries or damage like this to an infant?
(Will go through Summary of Findings in report and use computer images of CT to explain to jury)
 - Acute vs. Chronic;
- Skeletal Survey of April 28, 2003;
- See Ramalle Nay'Shawn Holloway on September 29, 2005;
 - Purpose of examination?
 - Results of examination?
- Can you explain to the jury the process the body goes through follow the type of trauma you discovered in Ramalle Nay'Shawn Holloway?

- Are there certain stages of this progression that, when analyzed, allow you to form an opinion of the time span between trauma and the presenting condition to you?
 - Explain: Will go through acute and chronic analysis of injuries.
- Opinions
 - Do you have an opinion, based on a reasonable degree of medical certainty, whether the conditions you observed during your last examination are temporary or permanent?
 - Basis of Opinion?
 - Opinion?
 - Did you form an opinion, based on a reasonable degree of medical certainty, whether the conditions you observed during your exams of Ramalle Nay' Shawn Holloway are consistent with physical child abuse or Battered child Syndrome?
 - Basis if Opinion?
 - Opinion?
 - Did you form an opinion, based on a reasonable degree of medical certainty, from the conglomeration of findings, dating back from the initial CT scan of Ramaelle Nay' Shawn Holloway on December 25, 2002, how long before that scan did the trauma to Ramalle Nay' Shawn Holloway occur?
 - Basis of Opinion?
 - Opinion?

1. Are you familiar with what is termed the "Battered Child Syndrome"?

A. Would you explain for us your understanding of that syndrome? What is its history? What is the current state of BCS?

B. Is this a recognized diagnosis in the medical field?

C. Is the Battered Child Syndrome accepted by both the sub-specialties of pathology and pediatrics? What data is the Battered Child Syndrome based upon?

Is the collective knowledge of clinicians often the basis for recognizing new diagnoses?

D. What are the common elements of the Battered Child Syndrome?

[injuries in different stages of healing, no explanation or inconsistent explanation for the injuries, nature and location of the injuries allows an opinion that they were inflicted by some other person, not accidentally caused]

E. When you are in a position of considering whether the Battered Child Syndrome applies to a particular injured child, do you consider all the injuries collectively in reaching that conclusion? Why?

F. Can focusing on just one injury be misleading? Please explain.

G. Are you also familiar with the Shaken Baby Syndrome? Is that a subcategory of the Battered Child Syndrome?

2. Are you familiar with the research and opinion in the medical field as to the effects on infants and toddlers of various types of falls?

A. What does the research show about that? What height of fall is necessary to produce serious head injuries or a risk of death?

B. If a child falls from a height sufficient to cause life-threatening injuries, what type of injuries would you expect?

C. Do children suffer life-threatening injuries in falls from common, household heights? Are there any exceptions to that? [walker falls down stairs]

D. What is the basis of the common opinion that children don't suffer life-threatening injuries or death as a result of common falls? Again, is the collective clinical experience of physicians a common basis for drawing such conclusions? Is that borne out in your clinical experience as a pediatrician?

E. Would you tell us about the published studies that relate to falls?

3. Have you developed specific expertise relating to the Physical Abuse of Childring/Shaken Baby Syndrome?

A. Would you tell us about your experience and training in that area?

B. Have you performed research relating to the Shaken Baby Syndrome? Have you treated or worked with victims of SBS as a physician?

C. Have you authored or co-authored articles and chapters in books and journals concerning that topic?

D. Do you stay current with advancements in the field concerning this particular syndrome?

E. Do you also consult with other physicians as an expert in shaken baby injuries?

F. Have you testified as an expert witness as to the Shaken Baby Syndrome in cases around the United States? How many times?

4. Would you explain to us what injuries in young children and infants are associated with having been caused by shaking? Are those diagnostic criteria for the Shaken Baby Syndrome unique to that cause?

RETINAL HEMORRHAGES/ OCULAR DAMAGE

A. Using the diagram of the eye that is being projected on the screen, would you explain to us what the important parts of the eye are, in relation to its significance in Shaken Baby Syndrome?

B. Would you illustrate for us what happens during violent shaking of a young child that causes retinal hemorrhages? [use Lauridson demonstration of mechanism of retinal hemorrhages)

C. Based on your familiarity with medical literature and in your own experience, how often are retinal hemorrhages in young children associated with other causes, such as accidents? Are they documented in common falls, such as from couches, beds or chairs? Falls down stairs? How common are they seen in auto accidents, even severe and fatal accidents?

D. When retinal hemorrhages are caused by disease processes or increased intracranial pressure, do those hemorrhages differ from those caused by whiplash shaking? Please explain and illustrate. In your opinion, can chest compressions associated with doing CPR on a young child cause the type of retinal hemorrhages you have described which are common in inflicted head trauma cases? Why not?

E. Do children suffer bilateral, diffuse retinal hemorrhages in straight falls from less than ten feet? Are retinal hemorrhages common even in falls from higher than ten feet? Why not?

F. What is a retinal detachment and what causes that condition in the context of the shaken baby syndrome?

[illustrate with Power Point slides - chart and appearance through ophthalmoscope]

G. What is the significance of that finding, when it is present?

H. What other causes are recognized for retinal detachment in an infant?

I. When retinal detachment is seen in conjunction with bleeding in the brain, retinal hemorrhages, and extreme brain swelling, what is the likely cause?

INTRACRANIAL BLEEDING

5. Would you explain for us what causes bleeding within the brain of a child who has been violently shaken?

[using the diagrams, explain basic brain anatomy - using Dan Davis CD-Rom, explain the mechanism that results in shearing of bridging vessels in the brain]

A. How common is subdural or subarachnoid bleeding in a baby or toddler from causes other than inflicted head injury?

B. Is subdural or subarachnoid bleeding seen in common falls from small heights?

C. What about in auto accidents? Even severe accidents?

D. In cases where young children are either killed by shaking or suffer permanent brain damage, does the bleeding within the brain actually cause the child to die?

E. What does cause death or severe brain damage?

SHEARING FORCES WITHIN THE BRAIN - DIFFUSE AXONAL INJURY

6. Would you illustrate for us what happens when shearing forces are applied to an infant's brain during an act of violent shaking?

A. {use Lauridson animations to explain normal axon function and diffuse axonal injury }

B. Other than violent whiplash forces, is there any other cause that produces the same type of results in an infant's brain?

C. After a baby has been violently shaken, and assuming the shaking was hard enough to result in brain death, what is the course of the Shaken Baby Syndrome? What actually causes the brain to swell?

D. How soon after such a child is shaken would symptoms become apparent? What symptoms would occur in such a child? What is the basis of those opinions?

E. Would a child who is fatally shaken be capable of reacting normally after the injury is inflicted? Would the child be capable of sucking on a bottle? Crawling? Interacting? Crying normally?

7. Would you explain for us the difference between the forces involved in a straight fall and the forces involved in violent shaking?

A. What is the difference in the effect on a young child's brain of translational forces in a fall versus rotational, acceleration-deceleration forces during a whiplash-type shaking?

B. Could you illustrate the difference for us? {the egg demo?}

8. Is there a consensus being reached in the medical field concerning how much force is involved in a shaking episode when children suffer permanent brain damage or death?

A. Is that consensus reflected in the American Academy of Pediatrics policy statement issued in 1993? What was said about the nature of the force in that policy statement?

B. What is the basis of the opinion that violent forces are required to explain serious or life-threatening injuries?

C. Can you demonstrate, using a stuffed animal, the general degree of violence that experts believe is required during shaking of a baby in order to cause life-threatening injury or death?

[stuffed animal or doll demonstration]

D. Based upon your own research and that of others, what size and strength is required for a person to be capable of shaking a baby and causing permanent brain damage or death?

E. What is the basis of that opinion?

F. In your opinion, is it likely or unlikely that a four-year-old child could generate the forces necessary to cause retinal hemorrhages, intracranial bleeding and shearing injury to the baby's brain? Why not?

G. Have you performed research that indicates how long an average adult can shake a doll weighing the same as an infant? Tell us about that research.

1. How long could the subjects shake the doll before reaching exhaustion?

2. How many shakes per second did they generate?

9. Based upon your awareness of the medical literature and your own experience, is it common or uncommon for those who shake babies violently to delay seeking medical care for the injured baby?

A. What is the common situation? Is that borne out by your experience working on cases, as well as the articles in the literature?

B. Given the rapid onset of symptoms and the quick deterioration of these victims you've described earlier, what effect does delay in seeking medical care have on victims?

C. If the caretaker of the child does not tell medical and other professionals the truth about the trauma the child suffered, what effect does that have?

10. Are you familiar with the feeling among some medical professionals that there must be an impact in addition to the shaking in order to result in serious injury or death to a young child?

A. What is the basis of the opinions by those medical professionals?

B. Do you agree? Why not?

c. Would you explain the difficulties with the opinion that impact is required?

11. Dr. _____, based on your own experience and awareness of the medical literature, are there any other disease conditions which completely mimic every finding of the Shaken Baby Syndrome?

A. Please explain.

B. Are there some cases where an initial diagnosis of SBS is found later to have been wrong because a disease or other process caused all the findings?

12. When a baby is shaken so violently that death results, would experts expect to see bruises on the baby's chest where the adult grabbed the baby to do the shaking?

A. Why not? Are bruises common or uncommon in Shaken Baby Syndrome cases?

B. In that scenario, would experts expect that the baby would always have damage to the neck? Why not?

C. Are rib fractures always seen when babies are shaken to death? Majority of cases? Less than 50%? Please explain.

D. Are fractures of the arms and legs always seen when babies are shaken to death? Why not?

E. As to all of those findings (bruises, neck injuries, rib fractures, and fractures of the long bones), are any of them considered common enough to be part of the diagnosis of Shaken Baby Syndrome?

1. Dr. _____, have you reviewed material relating to the injuries suffered by H.J. J. in Pleasanton last June?

A. Did you review the autopsy report? Other medical records?

B. Have you also reviewed the statements that the day-care provider, Ms. Risky, made to the police, to EMT's, to H.J.'s mother, and to the 9-1-1 operator?

C. Have you discussed this case with Dr. _____, the pathologist who performed the autopsy? Have you also talked with the attending physicians in the emergency room and the pediatric ophthalmologist?

D. Did the information you reviewed allow you to reach conclusions as to H.J. J. to a reasonable medical certainty?

2. Based upon your review of those materials, and your discussion with medical professionals and others, are you able to form an opinion, to a reasonable medical certainty, as to what caused H.J.'s death in June of this year?

A. What is your opinion as to the cause of her death?

B. Would you explain for us the basis of your opinion?

C. What injuries were documented after H.J. was taken to the hospital?

D. What is the significance of the entire collection of those injuries?

E. In your opinion, and from what you have reviewed, did you see any other explanation or account that would explain this collection of injuries in H.J. J.?

F. Did you review Defendant's claim that H.J. was dropped approximately 42" onto a linoleum floor at about 9:00 a.m. the morning of June 16th?

G. Given her description of that event, could that have resulted in the collection of injuries that caused H.J.'s death? Why not?

H. If H.J. had died as a result of a fall, what height would you have expected that fall to be? What other medical findings would you have expected if she suffered a fatal fall?

3. What is your opinion as to when H.J. suffered the ultimately fatal injuries to her brain?

A. Please explain the basis of that opinion?

B. If H.J. had been fatally brain injured prior to 8:30, when she was dropped off at the day-care center by her mother, would she have been able to eat 4 ounces of a bottle almost 30 minutes later?

C. In your opinion, would the day-care provider have mistaken her condition as "fine" after the fatal head injury was inflicted? Please explain.

D. In fact, in your opinion, what symptoms would H.J. have likely experienced after being head injured? How long after would those symptoms have likely been experienced?

4. Would you tell us what caused H.J. to go so rapidly from being "fine" to being essentially brain dead a few hours later?

A. Had the person who shook H.J. violently have immediately reported what happened and sought medical care for her, would that possibly have made a difference in the outcome for H.J.?

B. Can you say that delaying seeking medical care for her, then not telling those who provided medical care for her what had actually happened, would have had a negative effect for H.J.?

C. Please explain.

5. Dr. _____, can you express an opinion as to how much force would have been involved in shaking H.J. in order to create these injuries and the fatal outcome?

A. What is that opinion based upon?

B. Is the collective experience of those who treat children who survive various forms of head injury a valid basis for such opinions?

C. In your opinion, is there anything that H.J. could have done to herself to create the retinal damage, the bleeding in her optic nerve, the subdural and subarachnoid blood in her brain and the direct damage to her brain?

D. Is there anything that any of the children in the Risky day care, who were four years of age or younger, could have done to create those injuries in H.J.?

6. Other than a violent whiplash shaking of H.J.'s head, what other mechanism would possibly explain this combination of head and eye injuries?

A. Did you see any description of such a mechanism in the records that you reviewed?

B. Is Sudden Infant Death Syndrome even a consideration concerning H.J.'s death? Why not?

C. In your opinion, was H.J. suffering from a preexisting bleeding disorder, based on your review of her medical history?

D. What is the significance of the finding in the hospital that her PT and PTT times were elevated? Based on the medical literature, are there peer-reviewed articles that support the finding that traumatic head injury results in alteration of these measures? Please explain.

E. Had she suffered from a preexisting problem with bleeding, what would you have expected concerning her medical history prior to June 16th?

7. Doctors who treated H.J. noted in the hospital that there appeared to be older subdural fluid collections in her brain, what is the significance of that finding?

A. Does the existence of older subdural bleeding mean that she was more susceptible to another episode of bleeding in her head from less violent force than you've demonstrated for us?

B. Please explain.

C. Ms. Risky stated that a four-year-old hit H.J. on the head with a plastic baseball bat on or about the first day she attended the day care. In your opinion, could that mechanism explain the prior subdural bleeding in the brain? Please explain why not.

D. What type of mechanism would have been required to cause the prior subdural bleeding in H.J.'s head?

E. H.J.'s mother has described that around that time there were two days when H.J. did not eat normally, wanted to be held constantly and brushed her head with her hand as though it "hurt inside", is that description significant in dating the prior trauma? Please explain.

8. H.J. received a DTaP vaccination two days before June 16th would you explain for us what that vaccination is?

A. In your opinion, is there any possibility that the vaccination she received on June 14th, which allegedly caused her to be irritable for a while, have been causally related to the severe head and eye injuries identified in H.J. on June 16th?

B. Please explain why not.

C. Are you familiar with medical professionals who claim that fatal head injuries can be caused by a reaction to a vaccination?

D. What is your opinion, based on your own review of all the literature and your own experience as to whether a reaction to a vaccination could create all the findings seen in H.J. J.? Explain why not.

9. In your opinion, Dr. _____, did H.J. J. fit the diagnosis of the Battered Child Syndrome? Please explain.

A. What is the basis of your opinion?

10. The records indicate that H.J. was born three months premature, does that alone affect any of your opinions concerning the cause of her older or recent injuries?

A. Why not?