

August 8, 2014  
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Thank you for giving me the opportunity to consult with you on the case of the child Naomi Burns (DOB 01/07/2014). For this case, I have been provided and have reviewed the following; 1) medical records for the child Naomi Burns involving admission to the hospital for injuries on and around 3/18/2014 and again, on or around 03/27/2014, 2) digital copies of all x-rays and radiologic studies involving that time frame for the child, 3) previous medical records for Naomi, including primary care records and birth records, 4) digital copies of retinal images taken during the second hospitalization demonstrating retinal hemorrhages, and 5) additional records regarding the investigation into possible child abuse involving the child Naomi Burns and 6) preliminary reports produced in this case from Dr. Patrick Barnes and Dr. Khaled Tawansy.

My initial impressions regarding this case are as follows:

- 1) Naomi initially presented to University of Michigan hospital around 03/18/2014 with a picture of possible viral gastroenteritis due to a recent history of vomiting, diarrhea, lethargy, poor activity and feeding and possible apnea/seizure activity. She was admitted with a presumed diagnosis of viral gastroenteritis and dehydration and treated for possible seizures and apnea as well. She was subsequently discharged several days later. MRI studies were done and read as normal and with no signs of trauma, therefore a diagnosis of intra-cranial bleeding was not entertained.
- 2) Naomi re-presented to University of Michigan hospital many hours later with a continued history of lethargy, poor activity and change in mental status and with possible seizure activity. During this admission, a repeat MRI demonstrated a clearer picture of subdural hemorrhaging and lead to a more extensive work-up that also uncovered retinal hemorrhaging and a diagnosis of abusive head trauma.
- 3) Naomi has clearly been shown to have an element of increased intra-cranial space, shown from the onset of symptoms and on the first MRI, and is consistent with a picture of chronic hygroma/chronic sub-dural hemorrhage of weeks to months of age, or a condition called Benign Extra-cerebral Hydrocephalus or Benign Extra-Dural Hydrocephalus.

- Both conditions may pre-dispose a patient to sub-dural hemorrhaging with minimal trauma leading to a presentation such as Naomi's.
- 4) Naomi has retinal hemorrhaging (RH's) in both eyes, however, these RH's are predominantly superficial and do not involve findings consistent with much higher trauma (i.e. retinoschisis or vitreous hemorrhage). In addition, fluorescein angiography failed to demonstrate deeper retinal injury or poor perfusion injury to the retina – findings which would support much more significant trauma.
  - 5) RH's are common from birth/delivery process, though most types resolve very quickly, especially from average/non-traumatic deliveries. RH's from instrument assisted deliveries tend to occur much more frequently AND much more severe. This child had a very difficult and instrument assisted delivery. These types of deliveries will much more frequent have severe RH's and RH's that are of different types. Pre-retinal RH's, for instance, as is present in this case, can persist much longer and even months. This makes it impossible to tell, if at least SOME, of the RH's present in this case might date back (along with the chronic sub-dural hemorrhage) to significant birth trauma. That along with a very complicated intra-cranial bleeding picture for Naomi (evolving sub-dural hemorrhage from the two admissions, addition of likely viral gastroenteritis illness with the first presentation, presence of increased extra-cerebral space indicating a predisposing condition to further intra-cranial bleeding and known trauma just prior to admission to the hospital (the alleged drop of the child by the father)) creates a picture that can be consistent with mild trauma on top of a complex picture leading to the sub-dural bleeding and RH's seen in this child.
  - 6) Given that no other traumatic injury has been found, no significant external signs of other traumatic injuries were found, and there are no other red flags in the families present social circumstance in this case, my impression is that these findings can be consistent with accidental trauma, including mild trauma, on top of chronic conditions leading to the subdural bleeding and RH's found in this child.

My assessment is based upon personal knowledge and skill and 10 years of medical experience examining thousands of children a year. It is also based on my experience as a Board Certified Child Abuse expert and Board Certified Pediatrician. It is also based on my involvement with well over 2,000 child abuse cases over the last 7+ years and my testimony experience in over 300+ cases of alleged child abuse. The foregoing opinions are also held within a reasonable degree of medical certainty. I reserve the right to change my opinions in this case should further evidence be presented that creates a different picture than the records I currently have reviewed.

Thank you for your time and I hope this consultation helps those involved with this case.

Sincerely,

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