



Pathology/Biology Section - 2015

H41 Autopsied Cases of Suspected Child Abuse Showing Absence of Clinically Diagnosed Injuries

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After attending this presentation, attendees will understand that all that glitters is not gold when it comes to pediatrician-diagnosed child abuse.

This presentation will impact the forensic science community by exposing myths of pediatrician diagnoses of child abuse.

Unfortunately, child abuse cases occur, usually at the hands of the boyfriend of the child's mother. These cases are generally easily diagnosed and classified.

The forensic pathology cases investigated from 2010 to July 2014 total 420. The cases labeled as child, meaning newborn to age 12, number 34 or 8.1 % of the cases investigated. Of these, one was performed for the prosecution and 33 were for the defense. Of these 34 cases, ten were characterized by absent or trivial subgaleal hemorrhage, positive subarachnoid hemorrhage, positive subdural hemorrhage, and encephalomalacia. Two cases were diagnosed as having skull fractures in life, none of which were demonstrated at autopsy. Two cases were diagnosed as having "classic bucket handle metaphyseal fractures," none of which were demonstrated at autopsy. The remaining 24 cases revealed evidence of child battery including ruptured jejunum, multiple blunt impact injuries to the head and other areas, or non-accidental burn injuries.

Resuscitation by closed chest cardiac massage was first described by W.B. Kouwenhoven et al. in 1960. In 1964, Wilder reported on training ambulance personnel in the technique and reported no injuries. This was followed by legislative action which brought cardiopulmonary resuscitation to almost all areas of the United States by 1970.¹⁻³

In 1971, A.N Guthkelch wrote in the *British Medical Journal* that infants without evidence of subgaleal hemorrhage had subdural hemorrhage. Citing the work of Ommaya, he proposed that non-impact shaking could cause these injuries.^{4,5} As time has gone by, the three primary signs ("triad") of shaken baby syndrome have become entrenched in the medical literature and in pediatricians' training. The appearance of retinal hemorrhage, subdural hematoma, and encephalomalacia diagnosed in life has become the hallmark of criminal child abuse and has caused many caretakers and/or parents to be arrested and charged with a capital offense. In addition, Dr. Kleinman has written extensively and almost exclusively about the "classical metaphyseal fractures" seen in abused infants. Dr. Ayoub has written recently and criticized Dr. Kleinman's theories.^{6,7}

In this study, ten cases diagnosed in life and at autopsy are presented. Only one case had subgaleal hemorrhage and it was extremely small. Nine of the ten cases had no blunt impact injury to the skull as demonstrated by absent subgaleal hemorrhage. Two cases had clinically diagnosed classic metaphyseal fractures which were not demonstrated at autopsy. Two cases had clinically diagnosed skull fractures which were also not demonstrated at autopsy.

In spite of the negative autopsies, all ten deaths resulted in the prosecution of adult care takers, as abusive head trauma. Recommendations concerning proper autopsy techniques in suspected child abuse cases are presented. Suggestions concerning proper cause and manner of death statements are presented as well.

References:

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4. Guthkelch, AN: Infantile Subdural Haematoma and its relationship to Whiplash Injuries, *Brit Med J* 2: 430-31 1971
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Child Abuse, Infant, Autopsy