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A Battered Child or Electrocution? A Case Report.



طفل يتعرض للضرب أو للصعق الكهربائي؟ دراسة حالة.

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Abstract

The dead body of a 13-year-old boy was transferred from the Department of Forensic Medicine in Al-Qadisiya Health Directorate, Al-Qadisiya province to the main medico-legal directorate in Baghdad.

Bruises were scattered all over his body with bite marks on his left shoulder and superficial wounds in different regions, in addition to a bruise similar to a ligature around the neck. There was also an electrocution burn on the right forearm. The body was transferred because of the unavailability of forensic pathologists in that region and the difficulty of performing the autopsy by other doctors in order to give a proper autopsy report to the court and whether it was a case of battered child syndrome, electrocution, or homicide through injuries the perpetrator tried to conceal.

It was revealed that the boy was electrocuted, and electrocution was recorded as the cause of death.

المستخلص

تم نقل جثة صبي يبلغ من العمر ١٣ عاماً من قسم الطب الشرعي في مديرية صحة القادسية في محافظة القادسية إلى المديرية الطبية الرئيسية في بغداد. كانت الكدمات منتشرة في جميع أنحاء جسمه وعلامات عض على كتفه الأيسر وجروح سطحية في مناطق مختلفة بالإضافة إلى كدمة تشبه رباط حول الرقبة. كان هناك أيضاً حرق كهربائي في الساعد الأيمن.

تم نقل الجثة بسبب عدم توفر أخصائي في علم الأمراض الشرعي في تلك المنطقة وصعوبة إجراء تشريح من قبل أطباء آخرين من أجل تقديم تقرير مناسب لتشريح الجثة إلى المحكمة وعمّا إذا كانت متلازمة الطفل المضروب أو الصعق بالكهرباء أو القتل العمد من خلال الإصابات التي حاول مرتكب الجريمة أن يخفيها. وقد أظهرت الفحوصات أن الجسم قد تعرض للصعق الكهربائي وقد تم تحديد الصعق كسبب للوفاة.

Keywords: Forensic Science, Electrocution, Battered Child, Burn, Abuse, Bruise, Petechiae

الكلمات المفتاحية: علوم الأدلة الجنائية، الصعق بالكهرباء، الطفل المضروب، الحروق، سوء المعاملة، الكدمة، بقعة صغيرة حمراء أو بنفسجية ناتجة عن نزيف في الجلد.



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1. Introduction

Battered child syndrome or child abuse means non-accidental injuries inflicted upon the child whether they were trivial, severe or fatal. A previous study revealed that 25-50% of these injuries end in death or permanent disability. Unfortunately, there has not been any definitive statistical study in Iraq about these injuries [1].

The first to write about this syndrome was a radiologist named Caffey in 1946 [2]. Thereafter, these types of injuries were noticed and documented in 1962 when a pediatrician named Henry Kempe named them "Battered Child Syndrome" [3, 4].

Autopsy findings of such injuries include different types of abrasions, bruises, bite marks, and burns by cigarette butts on various parts of the body at different healing stages. Furthermore, injuries include limb and rib fractures. Signs of malnutrition and a filthy appearance of the child are also observed in cases of battered child syndrome.

The most common cause of death is subdural hemorrhage or subarachnoid hemorrhage with brain edema with or without skull fracture. Death may also happen due to infection, particularly pneumonia, which constitutes the highest percentage among infections as a result of lowered immunity and body exhaustion [2, 5].

Al-Rikabi and Al-Khateeb reported two fatal cases of battered child syndrome in 2012 at the medico-legal directorate in Baghdad [6]. Five other cases were also reported in a retrospective study from 1989 to 1998 by Baker and Al-Khateeb [7].

2. Case Report

The body of a 13-year-old boy was transferred from the Department of Forensic Medicine in Al-Qadisiya Health Directorate, Al-Qadisiya province to the main medico-legal directorate in Baghdad. The report containing the circumstances of death was sent from the investigation authorities along with all other information. Boy's family was

interviewed who stressed that the cause of death was electrocution, claiming that the electric shock happened when the boy was in contact with the cable of their house generator after which he fell unconscious. The boy was admitted to the intensive care unit (ICU) of Al-Diwaniyah general hospital where he was declared brain dead after three days.

2.1 Autopsy findings

External examination revealed an electrocution burn mark on the right forearm as shown in Figure-1. The whole body had scattered bruises in the same healing stage as shown in Figure-2. Superficial wounds were also seen in different healing stages with a bite mark on the left shoulder. There was a linear bruise similar to an abrasion collar extending from the mouth region to the posterior aspect of the neck, which aroused the suspicion of the attending physician.



Figure 1- *Electrocution burn mark on the right forearm.*



Figure 2- *Bruises on the lower limbs all in the healing stage.*

3. Discussion

Because the child was hyperactive, he had been involved in many fights. Therefore, we attributed those bite marks and superficial wounds to the afore-mentioned hyperactivity. The linear bruise on the neck was due to impression of the ligature used to fix the endotracheal tube in its position to prevent it from slipping as he was irritable while he was in the ICU. The bruises were scattered all over his body and were all in the same healing stage, in contrast to those seen in battered child syndrome, which are in different healing stages [2]. This is explained by the false belief among some people in Iraqi society, especially in rural areas, that hitting the electrocuted individual with a wooden stick will allow the electrical charges to be discharged outside his body. For that reason, he was beaten all over the body by his family with a wooden stick.

Further autopsy findings included other signs of electrocution such as fluidity of blood and petechial hemorrhages on the lung surfaces and between the lobes as well as on the heart [8,9].

There were no internal injuries comparable to the superficial wounds.

4. Conclusion

After external examination and autopsy findings, the



Figure 3- Linear bruise similar to the abrasion collar extending from the mouth to the posterior aspect of the neck and bite mark on the left upper arm.

investigating authority reporting on the circumstances of the incident concluded that the cause of death was electrocution.

It was also clear from the investigation that there were no intentional torture marks. The scattered bruises were inflicted after electrocution, as he was beaten by his family for their false belief that this act may save his life. Other superficial wounds on the body were the same as those commonly seen in hyperactive children.

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Conflict of Interest

The authors have no conflict of interest to disclose.

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