Occasional Electrocution Death, not Always Obvious, Not Always Circumstantial

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Abstract

To our knowledge electrocution causes death in an accidental situations especially those related to occupation. Taser is a brand of electroshock weapon which is used to incapacitate individuals without causing harm. It is used usually in many countries by police officers. In an occasional situation, a taser was used by police officers to arrest a 16 year old boy and caused fatality. Two lesions were found on his lower back, the lesions were confusing and the history was irrelevant. Previous experience is needed in such cases for confidently identifying the cause of death. Safety of taser should still be questionable.

Keywords: Taser, Electrocution, Death, Safety.

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1- Introduction

Taser is an electric weapon capable of releasing significant amounts of electricity in rapid pulses, causing uncontrollable muscle contraction.[1] Safety of taser is not confirmed yet[2] and still used widely especially by police officers.[3-4] Manifest skin lesions caused by taser are somehow different from those related to the usual electrical burns noticed.[4-5] A 16 year old male died after being electrified using a taser by the police officers in order to arrest him. They claimed that he fell while he was escaping. Nothing significant was found during autopsy except of two vague dark lesions in his back. The awareness and previous experience about such atypical lesions is rarely reported in the literature[6] and considered helpful for easy and confident identification. Furthermore, the probability of death caused by the use of taser should be taken in consideration.[4]

CASE REPORT

A 16 year old male was transferred dead by the police officers to the emergency department after a chase to arrest him. The police officers claimed that he fell while he was escaping. He was transferred to the nearest hospital. Death was declared by the medical staff on arrival. The body was referred to the forensic department where full autopsy was applied. External examination of the body only revealed the presence of two symmetrical

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well circumscribed (0.5 cm in diameter) dark lesions (Figure 1) at the lower part of the back in the lumber region (Figure 2). The distance between their centers was 5.5 cm (Figure 3). The superficial layer of the skin on top was partially lost. no other injuries were found. Dissection of the body revealed the absence of any traumatic lesions or pathological changes that may cause death in such individual. Histopathological examination of the specimens obtained from the back lesions revealed an epidermal invagination, spindling of keratinocytes and elongation of their nuclei with a congestion of underlying dermis and subcutaneous fat, which was consistent with electrical injury. Toxicological screening was negative.

(Fig 1,2): The only finding in the body was the presence of such symmetrical well circumscribed dark lesions at the lower part of the back.

DISCUSSION

Electrocution may cause death accidentally.[7] Using non confirmed safe tools[8-9] such as taser against others does not meet the concept of accident. Confirmation of safety means that the use of such tools should not absolutely cause death.[10] In another way, "accidentally happens" does not mean that the use of such tools may cause death in occasional situations.[11] On the other hand, considering electrocution as the cause of death in susceptible situations is a challenge in forensic pathology practice.[12] Findings vary from being non obvious to nothing at all or occasionally unusual as presented in this case.[13] The Irrelevant history and circumstances raised the challenge and made it more difficult to identify the cause of death. Previous experience is needed to give the final decision confidently.

CONCLUSION

Lesions caused by electrical tools such as

taser are unusual and their identification easily and confidently needs a previous experience and much awareness. Even if being manufactured to be safe, taser is still unsafe and may cause death. Murdering someone accidently using non-confirmed safe tools is not acceptable and needs much more discussion and much more studies.

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تشخيص الوفاة بالصعق الكهربائي ليس واضحاً دائماً وليس متفقاً دائماً مع ظرف الوفاة

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الملخص

إنَّ من المتعارف عليه أن الوفاة نتيجة الصعق الكهربائي تكون عرضية وفي الغالب نراه بين صفوف العمال الذين تتطلب طبيعة عملهم التعامل مع الآلات الكهربائية، ومن المتعارف عليه أن الصاعق الكهربائي أداة كهربائية تستعمل لشل حركة الناس دون أن تسبب أية أذى لهم، والصاعق الكهربائي يستعمل بكثرة في بعض الدول من قبل رجال الشرطة أحياناً؛ وإن هذا الصاعق الكهربائي ربما تسبب الوفاة، وقد قمنا بتسجيل حالة وفاة في الأردن نتجت عن استعمال الصاعق الكهربائي، وقد كان تشخيص سبب الوفاة صعباً ومحيراً ، إذْ كانت علامة الصعق الكهربائي على الضحية غير اعتيادية والرواية المحيطة بظرف الوفاة كانت مضللة، وإن التجربة السابقة والعلم المسبق بمثل هذه الإصابة من حيث شكلها وطبيعتها يعد ضرورياً لتشخيص الوفاة بمثل هذه الأدوات بكل ثقة، وعليه فإن الأمان باستعمال الصعق الكهربائي لا يزال أيضاً علامة استفهام بحاجة إلى إجابة قاطعة.

الكلمات الدّالّة: الصاعق الكهربائي، التكهرب، الوفاة، الأمان.