

A suicidal case committed by a specialized electricity mechanism: a case report

Özel düzenekli elektrik akımı ile intihar: olgu sunumu

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Abstract

Deaths due to electric current can be seen particularly in the adult population due not only to accidents but also due to suicides as well. We present here an electrician who used an alarm clock together with an electrical wiring and committed suicide by a special timing mechanism in his home environment. We aimed to evaluate the medicolegal features of suicide via electrical current in this report. Our case was a forty years-old male electrician who had been receiving anti-depressive therapy. He had two children and his wife had left him with the children two months ago. She had started divorce proceedings showing incompatibility between the couples as the reason. He had peeled the plastic outer cover of a copper cord and wrapped the one end of the cord into a clock devoid of plastical portions and the other end to electric socket. The copper cord between these connections was wrapped around his neck and left ankle. He was found in his bed in a lying position with a clock set to four o'clock, empty drug bottles and suicide letters beside him. External examination revealed skin lesions due to electric current while internal examination revealed nonspecific changes. In this case report, we discussed the medicolegal issues of planned suicidal deaths due to individually set-up mechanisms of electricity giving a special impact to its forensic characteristics.

Keywords: Electrical injury, suicide, crime scene investigation, autopsy, forensic sciences.

Özet

Elektrik akımına bağlı ölümler, özellikle yetişkinlerde kazaların dışında intihar şeklinde de görülmektedir. Bu çalışmada; özel düzenekli elektrik akımına bağlı intiharların medikolegal özellikleri açısından irdelenmesi amaçlandı. Olgumuz kendi ev ortamında elektrik tesisatından zaman ayarlı özel düzenek kurarak intihar eden 40 yaşında, depresyon tedavisi gören elektrik teknisyeni iki çocuklu bir erkektir. Eşi geçimsizlik nedeniyle boşanma davası açmış olup, yaklaşık iki ay önce çocuklarını alarak evi terk etmiştir. Sol ayak bileği ve boynu çepeçevre saran, plastik dış yüzeyi soyulmuş bakır kablunun bir ucunu da plastik aksanını çıkarttığı çalar saatin içine monte ederek saati dörde kurup yatağına yatmış olduğu ve intihar mektupları ile yatağının yanında boş ilaç kutularının bulunduğu tespit edilmiştir. Dış muayenede; elektrik yanığına ait lezyonlar, iç muayenede ise spesifik olmayan değişiklikler görülmüştür. Bu olgu sunumunda, özel düzenek kurarak elektrik akımı ile yapılan intihar olgularının adli-tıbbi özellikleri irdelenerek tartışılmıştır.

Anahtar sözcükler: Elektrik yaralanması, intihar, olay yeri incelemesi, otopsi, adli bilimler.

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Introduction

Electricity is commonly used in today's world in various sectors such as in medical diagnosis and treatment and in home, factory and building instruments. This common utilization however can result in deadly injuries [1-3].

Childhood deaths due to electricity are mostly due to home accidents because of unawareness, seldom to suicides and very rarely to murder. However in adults suicides, home and work accidents predominate [4].

Usually no signs could be detected at skin in electrical injuries due to loss of skin resistance in the presence of humid environment, wet ground and absence of ground connection. As the autopsy findings are also not definitive, the attention of the forensic science doctor is directed to the findings of crime scene investigation to uncover the reasons for death [5]. We aimed to emphasize the importance of crime scene investigation in finding out the reason and origin of planned suicidal deaths due to individually set-up mechanisms of electricity.

Case report

Our case was a forty year-old male electrician who had committed suicide by a time- set electrical wiring. He had two children and his wife had left him with the children two months ago. She had started divorce proceedings showing incompatibility between the couples as the reason. His past history taken from his family revealed that he had been receiving anti-depressant therapy and experienced unsuccessful attempts of suicide in the past. During crime scene investigation, we observed a copper cord with its plastic portions peeled and an alarm clock devoid of plastic portions which was set to four o'clock. One end of the copper cord was connected to the metal part of the alarm clock (Fig.1) and the other end was connected to the electric socket. The copper cord between these connections was wrapped around his neck (Fig.2a) and left ankle (Fig.2b).

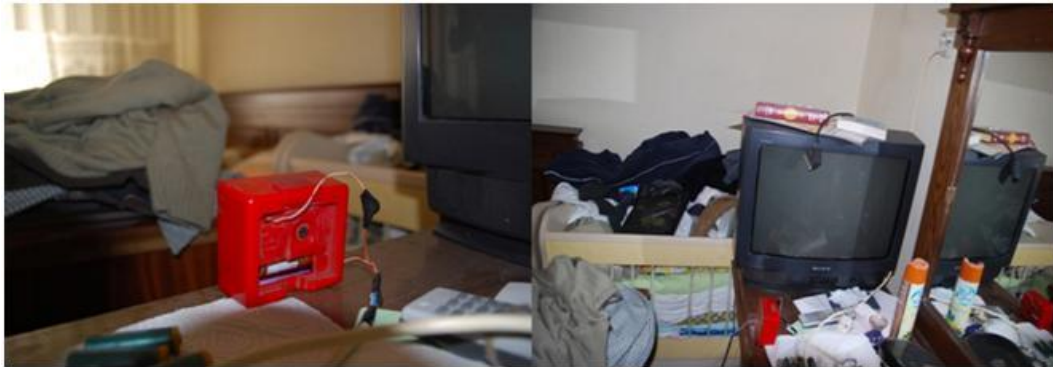


Figure 1. One end of the copper cord was connected to the metal part of the alarm clock.

Beside his bed there were bottles of anti-depressant drugs and letters written by him at 00.30 to the prosecutor, his wife and the family of his wife. External examination revealed oozing blood from both of his nostrils; punctuate bleeding areas in the dorsal surface of his trunk, a green-khaki electrical burn line of 0.2cm width all around his neck showing electro-metallization findings and a lesion of 0.6cm depth and 0.2-1cm width surrounding the left ankle. Internal examination revealed externally congested brain, cerebellum and lungs. There was a sparkling and hemorrhagic fluid discharge by squeezing in lung sections. We observed hemorrhage between the soft tissue and muscles of neck and also within thyroidal sections. The kidneys were also congested at sections.



Figure 2. The copper cord between these connections was wrapped around his neck and left ankle. (a and b)

Discussion

Electric energy is so commonly used that it has become one of the essentials of modern life. The industry, offices and homes are tightly dependent on electricity. Although electricity provides comfort to the community, it also brings out various important problems [6, 7].

The origin of deaths due to electrical injury is mostly due to accidents [5, 6, 8, 9]. Mostly the accidents in homes and offices are due to negligence, ignorance and lack of taking measures. Also the wetness of the environment and not using suitable clothing during work facilitates accidents. Isolation defects in extension cables, broken plugs and sockets and improper ground connections of electric grid are some of the reasons for these accidents [6, 8]. Suicide by electric current is extremely rare. Some methods have been used for this type of suicide. Mechanisms have been reported in cases that committed suicide in bathroom. They had set-up apparatus that cuts off electric current as the bathroom door is opened for the protection of people other than the suicide. Detailed crime scene examination is extremely important for these types of suicides [6, 8-10]. Committing murder by electricity is very rare and needs special information and equipment. Methods include; installing wires throughout the road the victim will pass, giving electric current to bathroom water and wrapping electrical cords around the victim [5, 6, 8]. Electrical trauma is frequently used for torture as it shows less characteristic features. Electric current is applied to regions such as the penis, scrotum and fingertips which conduct electric current very well but not leave any trace [5, 8].

The definitive cause of death cannot always be detected in electrical injuries unless there are witnesses of the event. Demographic features, pointing out the detailed examination findings, performing meticulous crime scene examination and recording the images are important in finding out the origin and reason of death [9].

But lesions due to electricity could still be not definitive in finding the origin. In our case; anti-depressive therapy and previous unsuccessful attempts of suicide in the past history, four different suicide letters, and warning notices of electricity for the ones who will enter the room and the special equipment connected to the electric current determined in the crime scene, particularly, guided us in finding out the origin of death [11]. There are cases in the literature committing suicide by wrapping electric cords around their hand and ankles [9]. For this reason, importance has been given to cases setting up various mechanisms by electric current to commit suicide.

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