

An Unusual Death in the Workplace: A Case Report

İŞYERİNDE OLAĞANDIŞI BİR ÖLÜM

Muhammet CAN MD,^a H. Bülent ÜNER MD,^b Mehmet TOK, MD,^c
Ümit ÜNÜVAR ATILMIŞ MD,^a Halis DOKGÖZ, MD,^ç Sermet KOÇ, MD^d

^aCouncil of Forensic Medicine, Ministry of Justice, İSTANBUL

^bIstanbul University, Institute of Forensic Sciences,

^cArgos Medical Company,

^çDepartment of Forensic Medicine, Mersin University, Medical Faculty, MERSİN

^dDepartment of Forensic Medicine, Istanbul University, Medical Faculty, İSTANBUL

Abstract

Occupational fatal accidents are relatively rare in routine forensic practice. The sudden death case presented in this paper seems to be unique with regard to the relevant literature.

A newly-employed worker was found dead beside the softening drum which he was appointed to operate. The machine was empty and there were blood stains inside, behind and on the lid of the drum. The technical expert report states that the machine had begun to work while the deceased was inside the drum emptying the leather, and so it was an accidental death. However, the scene investigation revealed that the drum could not have begun working spontaneously during the emptying process, and that the safety mechanism prevents such an occurrence. This case is presented to emphasize the importance of accurate scene investigation and expert report as well as the unusual features of the incident.

Key Words: Occupational accident; forensic medicine

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Özet

Ölümlü iş kazaları, günlük adli tıp uygulamalarında görece az rastlanan olgulardır. İş kazalarına ilişkin kaynaklar incelendiğinde, sunulan ölüm olgusu benzersiz görülmektedir.

Olgu yeni işe alınmış bir işçidir. Çalıştırmakla yükümlü olduğu deri yumuşatma makinesinin yanında ölü olarak bulunmuştur. Makine boş olup, içinde, arkasında ve kapağında kan lekeleri bulunmuştur. Teknik bilirkişi raporunda, olgunun makinenin içerisindeki derileri boşaltırken makinenin çalışmaya başlamış olduğu ve dolayısı ile ölümün kaza nedeniyle olduğu belirtilmektedir. Ancak tarafımızca yapılan olay yeri incelemesinde, böyle bir boşaltma sırasında makinenin kendiliğinden çalışmaya başlayamayacağı, güvenlik mekanizmasının devreye girerek bu duruma izin vermeyeceği anlaşılmıştır. Bu olgu, olayın olağandışı özellikleri yanında, eksiksiz bir olay yeri incelemesinin ve bilirkişi raporunun önemini vurgulamak amacıyla sunulmuştur.

Anahtar Kelimeler: İş kazası; adli tıp

Preliminary investigations, scene investigations and postmortem examination reports all have crucial importance for forensically evaluated death cases.

During the scene investigation, the scene should be protected, adequate photographing and video recording from various angles should be performed and a detailed sketch of the scene should be drawn. The records should be made and taken notes before any disturbance of the scene.

Initial statements might be highly illuminating since later statements might be obscured due to third party advice.¹⁻³

Some details like illumination, presence of any working machinery and any open parts should be noted. Otherwise, uncertainties cannot be clarified as in the case presented in this paper.

Case Report

The deceased had begun working at a leather processing factory in Istanbul with the help of his uncle who was already working there. He was reported to be the victim of a fatal occupational accident while operating a softening drum. His duty was to fill the drum, run it and empty the contents at five hourly intervals.

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Yazışma Adresi/Correspondence: Dr. Halis DOKGOZ, MD
Mersin University Faculty of Medicine,
Department of Forensic Medicine, MERSİN
halisdokgoz@gmail.com

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The scene investigation report was prepared at 23.40 on the night of the accident. It states that the lid of the leather processing machine on the second floor of the factory was open, traces of blood were present behind, inside and on the lid of the machine, and that the deceased was behind the machine in a position parallel to the machine with the machine empty.

The police report states that the uncle of the deceased had come to the factory when informed about the accident, found his nephew (deceased) lying dead behind the machine on a leather pile, and had closed the machine [Unclear statement, either he closed the lid or stopped the machine] and saw blood spots around the machine.

The statement of the accused (the owner of the processing factory) states that he had gone to the factory from home when informed about the accident, and had seen the ambulance and police. He further stated that he had nothing to do with the incident, but that he had employed the deceased on the request of his uncle. He further added that the deceased had not yet been insured [illegal to work uninsured] due to lack of certain paperwork, and that the deceased should have brought the required paperwork that day but did not. The owner added that the operating instructions of the machine had been orally explained to the workers [it seems that there was no written instruction].

The mechanical engineer was appointed as an expert. The expert report states that, while the deceased had been emptying the leather from the softening chamber the chamber began to operate and consequently the worker had been fatally injured. The report further states that the machine had an automatic sensory power switch in front and it might have begun to operate as the leather was thrown out onto the front panel. The report also states that the fault of the deceased is estimated as 6/8 for his absentmindedness and carelessness, the 2/8 of the fault is of the drying chamber since it is not standard for occupational safety. It also states that the owner of the factory has no fault in the accident.

The attorney on behalf of the leather factory in his written letter to the public prosecutor claims

that the deceased had been employed for night security position; the uncle of the deceased had requested him to be employed. The accident occurred when he entered the drying chamber for an unknown reason and striking of the machine while working there with his uncle and that the machine is fully automatic and has all safety features.

The Report of the Postmortem Examination Performed the Day After the Incident at the State Council of Forensic Medicine

External body description:

The body was that of a normally developed, under-nourished, minimally cachectic adult, Caucasian male appearing between 25-30 years of age, with a body length of 170 cm and body weight of 50 kg Rigor was fully developed. Lividity was developed, posterior, dependent, purple and slightly blanchable.

The scalp was covered by short-black hair. The face had a week-long unshaven mustache and beard.

Injuries:

1. Three parallel wounds of the left frontal region containing tissue bridges within the wound borders, measuring 1.5 cm, 3 cm and 4 cm long (Figure 1).

2. An "L" shaped wound 1 cm² wound between the eyebrows with a 3 cm oblique tail to the left (Figure 1).

3. A wound measuring 1 cm long within the midline of the nose containing tissue bridges within the wound borders (Figure 1).

4. An "inverse V" shaped wound at the right parietooccipital region with 3 cm and 6.5 cm long arms, with irregular wound borders containing tissue bridges (Figure 2).

5. A wound of 1 cm long at the left parietooccipital region containing tissue bridges within the wound borders (Figure 2).

6. Ecchymotic contusions on the left sternocleidomastoid region ranging 3 cm² and on the right neck ranging from trachea to the nape of the neck (Figure 1).



Figure 1. Injuries on the face and neck.



Figure 3. Injuries on the dorsal region.



Figure 2. Injuries on the head.

7. Extensive abrasions beginning from the right shoulder across the entire dorsal region (Figure 3).

8. Ecchymotic contusions, one on the right ankle elbow ranging 3 cm,² two on the right arm ranging 1 cm and 3 cm long, two on the left arm exterior region ranging 3 x 2 cm each. 9. Three parallel ecchymotic contusions on the dorsum of 1st metatarsus, 1.3 cm long each

Internal examination:

A Y-shaped thoraco-abdominal incision was made and the organs were examined in situ and eviscerated in the usual fashion. The musculature of the chest and abdominal area was of normal color and texture.

A scalp incision, craniotomy and evacuation of the brain were carried out in the usual fashion. Extensive hematoma was seen on the scalp. Under the “inverse V” shaped wound described above, there was a fracture on the right parietal bone. The

fracture arms were stretching 8 cm to the front and the posterior arm stretching to the skull base via right occipital and ending at the foramen magnum. The brain weighed/was weighed 1200 gram. There was extensive subarachnoid throughout the brain surface. There was no macroscopic pathology within the cross section of the brain tissue.

The chest was opened. 1200 cc of bloody fluid was emptied from the left chest cavity. No free fluid was seen at the right chest cavity. Both lungs were free with pale surface and cross sections. Right lung weighed 259 gram and left lung weighed 220 gram. There was a 6 cm long, deep hemorrhagic injury on the left lower lung lobe. And there was a fracture within the 6th rib on the posterior axillary consistent with the lung injury and the fracture end into the chest cavity.

The heart weighed 280 gram. There were few atheroma plaques within the aorta. The left ventricular wall measures 1.2 cm in thickness and the right 0.4 cm. There were no pathology within the cross sections and coronary veins.

The neck presented an intact hyoid bone as well as thyroid and cricoid cartilages. The pharynx and esophagus were intact with unremarkable gastro-esophageal junction. The stomach was intact.

The liver weighed 1010 gm and the inferior hepatic borders were slightly blunted. The liver surface was intact and there was no pathology except the pale discoloration. Cholecystitis or lithiasis were not identified. The structures of the hepatic hilus were intact.

The kidneys were intact without any macroscopic pathology.

Laboratory analysis: Postmortem toxicology was negative for the selected systematic toxicological analysis and no carboxy-hemoglobin was found.

In conclusion, the death was attributed primarily to internal hemorrhage due to cranial and rib fractures of multiple traumatic origin leading brain hemorrhage and internal organ injury. The manner of death was therefore ruled as unnatural.

The Scene Investigation Performed By Us

The softening drum has a diameter of 190 cm, making 8 cycles per minute, cycling in both direc-

tions (forward and backwards), having two arms outside should both be pressed and closed down in order to work the drum (Figure 4). The door of the drum can only be opened and closed outside. There are a total of 11 metallic projecting parts, each with a height of 26 cm high and a diameter of 4.5 cm (Figure 5). In order to make the drum work, a control switch should be turned on by rotating suggesting that it cannot be switched on just by throwing some materials on it. Therefore, we concluded that it cannot be an accident in the manner it was suggested.

Discussion

Decision for the manner of death in forensic postmortem evaluation should be based on a complete scene investigation performed by a competent



Figure 4. The softening drum (opened).



Figure 5. The interior of the softening drum (through the lid).

team. Any missing link and data herein makes obscure further decision making process. For example in this case, there was no state about fingerprint taken from the crime scene in the crime scene investigation report. Also, any material was not taken from the crime scene to detect of DNA. We concluded that it cannot be an accident because the machine could not run when the drum's door was open. We are not informed of the decision of the judge of this case.

In ideal conditions, the autopsy and postmortem examinations should be made by a forensic medicine specialist in an appropriate setting. A thorough laboratory analysis should be made taking into account the nature of the incident. Use of psychoactive drugs or alcohol might contribute the illumination of the manner of death.⁴⁻⁶

The technical expert appointed should be competent, independent and impartial.

Preliminary investigation, scene investigation and postmortem examination report all have crucial importance for forensically evaluated death cases.

In this case report, the postmortem examination and autopsy was performed by a competent forensic medicine specialist at an appropriate setting. The postmortem evaluation report is satisfactory as it contains all necessary analysis and details.

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