An Unusual Death in the Workplace: A Case Report

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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

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.
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 come to the factory 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 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).
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, 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 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.

**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).](image)

![Figure 5. The interior of the softening drum (through the lid).](image)
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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**REFERENCES**