Case Report

A RARE CASE REPORT OF DEATH IN A WASHING MACHINE WITH PATTERNED INJURIES TO TRUNK
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Abstract:
Here we describe a case report of accidental death of an adult male in washing machine. A worker in an industrial washing unit working as a drier of clothes entered the washing unit to clean his undergarments and accidentally switched on the machine knob. This set him into rotations inside the machine and eventually got trapped in between the outer drum and the inner rotator drum of washing machine. The specific patterned abrasions over trunk corresponded with patterns found over inner drum of washing machine.

Key words: Washing machine death, patterned abrasion, Traumatic asphyxia

Introduction:
Asphyxia is common mode of death in India. Though hanging forms the commonest cause of asphyxia, instances of deaths due to traumatic asphyxia as a result of compression of the trunk by various means like a heavy weight compressing the chest or abdomen, wedging of the body within a narrow space, deaths in large crowds are also encountered. However an incidence of a man getting struck in between the two cylinders of a commercial washing machine is a rare phenomenon unless there is gross negligence of the operator or a fault in the machine. We present a fatal case of traumatic asphyxia with unique patterned abrasions over front of trunk. The force causing the chest compression was distinctly determined by the autopsy and scene investigation.

Case report:
The police brought a case to mortuary of department of Forensic Medicine of Victoria Hospital for postmortem examination with a history of body struck in an industrial washing machine. History was obtained from the police who had conducted enquiry in to the cause of death. According to them a healthy adult male (the deceased) was working as a drier of clothes in an industrial washing machine for past few years. He was an experienced skilled worker and used to do about 8 to 10 hours work in a day and he was non alcoholic.

Figure 1: shows the picture of washing machine with victim’s legs upside the inlet, rest of the body has gone inside machine.
trapped in between the outer drum and the inner rotator drum and got compressed in between the two drums. He screamed for few minutes as told by other workers but could not rescue himself from this fatal event. The outer lid was cut open to remove the body by the police after taking photographs. The body was covered by a cloth and was transported to the Victoria hospital Bangalore, where it was declared as ‘brought dead’. The Figure 1, shows the picture of washing machine with victim’s legs upside the inlet, rest of the body has gone inside machine.

**Autopsy findings:** On examination on the table, body was that of moderately built and nourished male. The hands high up above the head, rigor mortis was fixed in the same position as shown in the Figure 2. The deep purple discoloration observed on the face, neck, hands and protruded tongue. Subconjunctival hemorrhages present in both the eyes. An interesting findings was the typical depressed patterned abrasions, 0.65cm in radius, uniformly seen over the front of lower part of the chest and upper part of abdomen (Figure No 3 and 4).

**Figure 2.** The hands high up above the head, rigor mortis was fixed in the same position

**Figure No 3 and 4:** Depressed patterned abrasions of size 0.65 cm uniformly seen over the front of lower part of the chest and upper part of abdomen

Three horizontal linear pressure abrasions below the patterned lesions over front of abdomen and another similar horizontally placed pressure abrasion notated over front of chest (Figure No 5a and 5b).

**Figure No 5a:** Three horizontal linear pressure abrasions below the patterned lesions over front of abdomen.
A linear grazed abrasion of size 9cm x 2cm present over the back of the chest. The internal organs were intact and congested with multiple petechial hemorrhages over surface of lungs, heart and in white matter of brain.

The cause of death was opined as Traumatic asphyxia as a result of compression of the trunk.

Scene of crime: The machine which was responsible was not put to use until inspection as instructed at the time of postmortem examination. On examination of the same machine, it was observed that the safety knobs of the outer door of washing machine was tampered so as to work even if it was not closed with a human interference and was made to work with a single button, which can trigger the machine to rotate, (similar to an elevator turning on even when only the outer door was closed). We also observed the outer drum and the inner rotator made up of yielding metallic plates. The later was having circular 0.65 cm sized uniformly arranged, centrally perforated elevations (Figure No. 6).

Discussion:
Traumatic asphyxia refers to a form of mechanical asphyxia where respiration is prevented by external pressure on the body: a heavy weight compressing the chest or abdomen, wedging of the body within a narrow space, death in large crowds have been reported. In this case it is a sort of entrapment in awkward position between outer drum and inner rotator. Though there was compression over trunk evidenced by presence of patterned abrasions but the fractures of ribs and injuries to internal organs of chest and abdomen were not observed, this could be due to yielding nature of inner rotating drum.

The outstanding feature of traumatic asphyxia is the intense cyanosis of deep purple or purple-red color, confined to the face, neck and shoulders up to the thoracic inlet. The mechanism of this gross discoloration of upper part of chest and face may be ascribed to the fact that heavy load/pressure upon the chest primarily might have compressed the thinner and less potent right side of the heart; whereas the more powerful left side of heart continued to pump the blood. This leads to considerable overfilling in the region of the head, resulting in such gross discoloration of the face and adjacent regions. Similar discolorations with
petechiae were noted in this case. ‘Perthes’ pressure congestion, a German term used to describe crush asphyxia has been coined after Perthes who described these characteristic features. Torso compression has been found to be the most common mechanism of asphyxiation of victims within vehicles.²

Chest compression resulting in death from crush asphyxia is usually inadvertent and accidental as also shown in the present case, although both suicides and homicides have been reported³. A similar case was reported by Bülent Eren et al⁶ of a 33-year-old man who was found 20 cm upper of the floor, compressed by rubbish container in the elevator in an unusually awkward position. The scene investigation corresponded exactly with the localization of the injuries found in the victim.

Patterned abrasions occur when the force is applied at or around right angle to the surface of skin. If a weapon with patterned surface strike the body or body falls upon a patterned rough hard surface, the abrasions will follow the pattern of the object⁷. The specific patterned abrasions over trunk observed in this case corresponded with patterns found over inner drum of washing machine and is consistent with the findings in reviewed literature.

Asphyxia due to compression is not a rare cause however death resulting in a washing machine with this typical pattern is unusual. In this case the machine was not guarded with safety measures. The precaution of closing the outer case was ignored by the washing unit staff which enabled the machine to rotate directly by accidental triggering of the switch. The location of the switch was such that there was a possibility of accidentally pressing the switch while the operator is resting his hand on the panel for support. Hence it is need of an hour to ensure the proper functioning of such machines with safety measures and creating awareness in workers of such uneventful outcome through education.

Conclusion:

The deaths at work place are common but death in commercial washing machine is rare. The specific patterned abrasions over trunk corresponded with patterns found over inner drum of washing machine and visit to the scene of crime confirms the mechanism of causation of the injuries. This case highlights a need to ensure the proper functioning of such machines with safety measures and creating awareness in workers of such uneventful outcome through education.

References: