

Case Report

RTA fails, Cyanide Succeeds: A Case Report

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Abstract

This is a rare case of homicidal cyanide poisoning. It was a case of Head injury due to Road traffic accident admitted in hospital for treatment. After more than a month of treatment, the patient recovered from head injury and was about to get discharge; when suddenly he became unconscious and died within two hours in spite of resuscitation. At autopsy other than the findings of head injury, the stomach contents had a peculiar smell and the organs were bright red in colour which created suspicion. Hence, the organs were sent for chemical analysis which revealed cyanide poisoning. These are the days where debate is going on regarding the necessity of autopsy in RTA cases. So, by presenting this case we would like to stress the importance of autopsy in RTA cases and the need of Chemical analysis of viscera even in admitted cases if there is any suspicion of foul play.

Key Words: Road traffic accident, head injury, cyanide poisoning

Introduction:

Cyanide is the one of the most lethal poisons known to man. Since the days of ancient Rome, cyanide and the derivatives of this highly toxic substance have been used as weapons. Although substances containing cyanide had been used for centuries as poisons, it was isolated in 1782 by a Swedish chemist Scheele. [1] Cyanides are often used for suicidal purposes, especially by terrorist because of their swift and sure action. But they are rarely used as a homicidal poison, as they are easy to detect owing to their characteristic odour and perceptible taste. [2-4]

Here we present a rare case of homicidal cyanide poisoning in a road traffic accident case with head injury, who was admitted in hospital for more than a month.

Case Report:

A 42 yrs male person was hit by an ambassador car when he was traveling alone in a two wheeler. He was admitted to hospital in an unconscious state, Pulse 120/min, B.P. 160 /110mmHg, Glasgow coma scale 9 / 15. He was investigated and was found to be having diffuse axonal injury.

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Patient was treated conservatively. Repeat CT scan revealed, Bilateral Subdural Hygroma in both frontal regions

This was evacuated by doing bifrontal burr hole under local anaesthesia. 12hrs after surgery patient started regaining consciousness, and he gradually recovering. On 35th day of admission he was fully recovered and was decided to be discharged from hospital. On the day of discharge suddenly patient became unconscious; they resuscitated but died within two hrs.

At autopsy, patient had multiple healed abrasions all over the body. Healed sutured wound on both frontal regions with burr hole was present. On dissection of Skull revealed dark colour contusion 6cm x4 cm in right Frontal lobe region. Stomach contains light brown colored fluid with a peculiar smell. Visceral organs were bright red in colour which suggested that the cause of death could not be head injury. Viscera were sent for chemical analysis which revealed cyanide poisoning.

Discussion:

Hydrocyanic acid or Cyanogens is very potent, extremely lethal and most rapidly fatal. [3] On ingestion of a large dose the symptoms usually appear within a few seconds or even during the act of swallowing. [3, 4] The toxic action depends largely upon the hydrochloric acid contents of the stomach. The onset of action is fast if it is taken in an empty stomach.

Alkaline cyanides when consumed are converted by hydrochloric acid in the gastric juice into chlorides, and hydrocyanic acid. This hydrocyanic acid is a powerful protoplasmic

poison which prevents the tissues from utilizing the oxygen from the blood by interfering with the action of enzyme Cytochrome oxidase and thus producing cytotoxic hypoxia resulting in death.

As death occurs very rapidly, there is hardly any time for treatment. The postmortem findings are very minimal, like bright, glistening and dilated pupils, cherry red hypostasis and characteristic bitter almond smell [2-5], but this smell cannot be appreciated by all and it fades quickly on opening the body. About 20-40% persons cannot smell the gas, and the ability to detect it is a sex-linked recessive trait. [5]

As death due to cyanide poisoning is very rare, there is every chance to miss this condition unless we have strong suspicion and viscera are sent for chemical analysis with a special request to look for it.

In the present case, a road traffic accident case with head injury, which has undergone neurosurgery and had been recovering in the hospital for more than a month, the chances of acute cyanide poisoning, is out of question. The only clue was sudden death of the patient who had fully recovered from head injury and was about to get discharged on the day of death. A cautious and meticulous autopsy by the forensic expert suspecting some foul play, made him to send the viscera for chemical analysis.

Otherwise routinely viscera will not be sent for chemical analysis in a patient who had been admitted in hospital for 35days, as any poison would have got excreted during that period. Sudden death, peculiar smell on opening the body and cherry red color of the viscera made him suspect cyanide poisoning in this case. Toxicological analysis confirmed it to be

cyanide poisoning, thus the cause of death in this case changed from head injury to cyanide poisoning. On re-investigation by the police, they found out that the deceased wife was the culprit who was present with the victim all the time in the hospital.

Her illicit relationship with another person was the reason for the murder of her husband. The road traffic accident which the deceased met was also planned by her. When it failed, she planned a fool proof method to get rid of him. She administered cyanide through the Ryle's tube which resulted in sudden death of her husband. Thus RTA fails and Cyanide succeeds. Later on the Investigating Officer changed the Sec. 304A IPC to Sec. 302 IPC and the accused was arrested.

Conclusion:

In any Road traffic accident case, autopsy is mandatory and if there is any suspicion chemical analysis of the viscera should be asked for even if the patient was alive for some period or hospitalized. A meticulous autopsy by the forensic expert with an open mind will always pay.

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