

## CASE REPORT

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# A multifaceted Investigation Saga of an Sordid Act of Mariticide - A Case Report

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## Abstract

Mariticide means literally killing one's own husband. Criminals use various methods and means to escape from a crime. Smothering is caused by obstruction of respiration through nose and mouth and establishing the homicidal manner of smothering is a difficult task. Neck is considered as a vital structure in the human body by being a relay station for vital structures passing through, any injury to neck is life threatening. When an assailant fabricates a wound following death he/she is hoping to deceive the investigating officers in the manner of death. Analysing the antemortem and postmortem nature of wounds may help in solving this. Here we discuss a case of mariticide by smothering disguised as cut injury to the neck and the investigation saga of this by using multifactorial approaches and methods.

**Keywords:** Mariticide; Luminol; Blood stain; Smothering; Cut throat injury; Call data record

## Introduction

Mariticide means literally killing one's own husband.<sup>1</sup> As per the national crime records bureau love and extra marital affairs is identified as the third biggest motives in murders. This rate has increased by over 28% between 2001 and 2017.<sup>2</sup> A manner of death indicates the circumstances under which a person died.<sup>3</sup> Often this is established by examination of the scene of death, history, circumstantial evidence, witnesses and autopsy findings. Forensic surgeons play a significant role in determining the manner of deaths when the person is found

dead. In this technically advanced society, unless like the yesteryear, information about plotting and enacting a crime, escaping from the police and law has become a non-difficult task. Such information is easily available on the internet, novels, movies, over the top platforms etc. Criminals prefer to dispose dead bodies to escape from law by various methods like burning, throwing bodies in rivers, mimic railway accidents, mutilate body parts and throw them at multiple places, burying etc., Here we discuss a case of mariticide disguised as homicide solved with the help of multifaceted investigation.



## Case details

On 28th of December in 2018 we received a requisition for conducting medico-legal autopsy on the dead body of a middle-aged man with cut injury to throat and other multiple cuts on the body (Figures 1 and 2). The case was booked under section 302 IPC.



Fig 1.



Fig 2.

Upon inquiring with the police it was learnt that he was a barber, resident of Kolar since 4 years and hails from Uttar Pradesh. On the said date at around 04:00 AM, the house door was knocked from outside, and he went to checkout but didn't return. The wife found his dead body with a cut injury to neck in front of their house.

Upon enquiring with the wife it was learnt that they had been married for 3 years, on the day before the incident they ate food and slept at around 11:00 PM in the night. At 04:00 AM when someone knocked on their door, the husband went out and came back to inform her that two money lenders from whom he had borrowed money as loan were outside and they wanted him to talk with them and so asked her to sleep. At 06:00 AM when she woke up and went out she saw her husband's body with multiple injuries on his body.

On examination, (i) Rigor mortis was appreciated all over, (ii) nail beds showed bluish discoloration, (iii) multiple scratch abrasions of varying sizes from 2.4 cm x 0.2 cm to 0.5 cm x 0.2 cm present at places around nose and mouth (Figure 3), (iv) incised wound measuring 8.6 cm x 3.5 cm x Thyroid cartilage deep present over front of neck 11 cm below to chin and 6 cm above sternal notch, on further dissection underlying platysma muscle, left sternocleidomastoid muscle, left external jugular vein were cut, the edges of the wound were cleanly cut (Figure 4) (v) two incised wounds measuring 24 cm x 3 cm x subcutaneous deep and 20 cm x 3 cm x subcutaneous deep present obliquely over front of right side of chest and abdominal wall 26 cm and 30 cm below to sternal notch respectively forming a 'V' shape mark, the edges of the wound were cleanly cut (Figure 5). On internal examination the stomach contained 430 ml of undigested rice meal with the smell of spirit and all other organs were unremarkable.



Fig 3.



Fig 4.

After examination, the visceras were preserved and sent for chemical examination to the state forensic science laboratory. The chemical examination report showed the presence of ethyl alcohol. The cause of death was opined as "On perusal





Fig 5.

of police requisition form 146 (i) & (ii), history, autopsy and chemical examination report I am of the opinion that death is due to smothering, however the deceased had consumed ethyl alcohol prior to death.”

## Discussion

Here, initially owing to the circumstances and history the case was considered as homicidal cut throat injury by unknown persons (Alleged money lenders).

Findings towards homicidal cut throat injury were (i) Horizontal cut injury in front of neck (ii) Blood stained clothes (iii) Assault by unknown as per history.

Findings suggesting it as not a case of homicidal cut throat injury as observed by the authors were (i) Cut throat injuries were superficial (Non fatal) (ii) Nail scratch abrasions on face (iii) No much blood effusion by cuts on chest (Suggesting postmortem) (iv) Criss-cross pattern cut injuries on chest and correspondingly on clothes (Attempt to fabricate the incident).

Important observations and inferences: (i) Superficial cut injuries (Fabrication attempt) (ii) Less blood effusion (Post-mortem injuries) (iii) Undigested food in the stomach and History of consuming dinner at late night (Wrong information provided by wife) (iv) Smell of spirit in stomach (v) Nail scratch abrasions on face and bluish discoloration of nail beds (Signs of death by asphyxia).

All these observations and inferences like nail scratch abrasions on face and possibility of death by asphyxia, non-fatal cut injuries on neck and front of torso and false statement by wife of deceased as confirmed by presence of undigested food in the stomach were communicated to the investigating officer by the authors.

The forensic science laboratory officers were called to the scene of crime by the investigating officer and they detected wiped out blood stains inside the home. The investigating officer obtained call data records (CDR) of the wife and learnt that she had active call hours at late night and early morning on the day of homicide.

The investigating officer interrogated the wife of the deceased with all the above information and she confessed the planned mariticide by smothering and an attempt to evade by fabricating the dead body with injuries and narrating a false story.

Smothering is caused by closing the external respiratory orifices by hands or other means. Here the person is deprived of oxygen to inhale and unable to exhale the carbon dioxide leading to death by failure in respiration. At autopsy usually contusions and nail scratch abrasions are observed around nose and mouth, there may be lacerations at inner side of lips due to pressing against the hard teeth. Classical signs of asphyxia like congestion, cyanosis and petechial haemorrhages may be seen. These signs are severe if the death is slow while in rapid deaths by smothering these signs may not be evident as the person dies immediately by cardiac arrest.<sup>4</sup> When the person is intoxicated he or she may not pose much defence against the assailant and the intoxication adds to rapid death. When soft materials like pillow, blankets etc., are used to cover the external respiratory orifices the abrasions, contusions and lacerations may not be seen. In our case the victim was intoxicated with ethyl alcohol as evident by the chemical analysis report, hence the signs of asphyxia and injuries by smothering were not classical. Similar findings were observed in cases reported by Theodore T. Brown et al.<sup>5</sup> Deliberate homicide by smothering is usually seen in infants, old and the weakened or intoxicated as they cannot struggle. It is very difficult to establish the homicide manner of death by smothering just by objective findings.<sup>6</sup>

Cut injury to the neck is a life threatening injury as many vital structures are stationed and pass through here. The cause of death varies from haemorrhage, vagal inhibition, choking, air embolism etc. The injuries to the neck are studied by categorising them into three zones. In homicidal cut throat injuries, zone I is most commonly involved. In antemortem injuries while the heart is still pumping the effusion of blood to surrounding structures and loss of blood are more. In a study reported by Souvagini Acharya et al<sup>7</sup> many cases of cut throat injuries with thyroid cartilage depth are survived with some morbidities. In our case the platysma, left sternocleidomastoid and left external jugular vein were cut exposing the thyroid cartilage. There was not much effusion of blood into the surrounding structures. Cut injuries on the torso were up to subcutaneous tissue depth and no effusion of blood around. Hence, the cut injuries on neck and torso were considered as postmortem injuries.



According to Ganong's review of medical physiology<sup>8</sup> the normal gastric emptying starts by 20 mins and completes by 90 mins to 180 mins. In a study by Andreas Franke et al<sup>9</sup> it was concluded that ethyl alcohol increases the gastric emptying time in concurrence with the type and concentration of beverages. In our study, when the author enquired, the wife of the deceased said that they ate food and slept around 11:00 PM and at 06:00 AM the next day she found him dead in front of the house. The author at autopsy observed that the rigor mortis was appreciated all over and the stomach had 430 ml of undigested rice meal with the smell of spirit. According to Nysten's rule<sup>3</sup> rigor mortis sets in by the first 12 hours following death and remains so for the next 12 hours and passes off by the next 12 hours. Hence, the author considered the time of death as around 11:00 PM in the night and not around 06:00 AM the next day.

The detection of blood stains, analysis of their pattern at crime scenes is considered as one of the important findings in crime scene analysis. Even if the crime scene appears clean and bloodless, efforts should be made to detect stains. Among all the tests Luminol test is considered as one of the best in detecting invisible blood stains<sup>10</sup>, this is 20 times more sensitive than other tests. The Luminol gets oxidised in presence of haemoglobin and releases hydrogen peroxide (Figure 6), which luminesces as blue-white light in dark. Haemoglobin in blood can be detected even in 1:10 million dilution and under 8 layers of painting too. In our study forensic science officers detected wiped out blood stains at the veranda of the house and sink. The investigating officer concluded the attempt of wiping off blood and suspected the scene of injury to be inside the house and not outside.

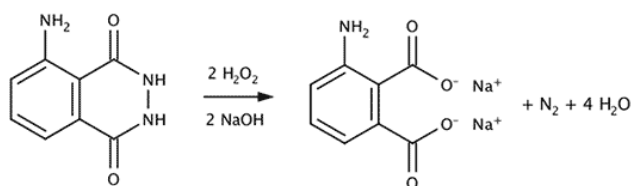


Fig 6.

The call data records (CDR) provide multifactorial help in investigating any crimes. CDR provides information on incoming and outgoing calls, SMSs, Time and usage of the internet. It also contains the International Mobile Equipment Identity number of calling and receiving mobile numbers along with the tower location of each mobiles. Analysing this help in preparing the pattern of calls, internet connectivity, gps, time etc. Through this a complete profile of calling and receiving mobiles. In the past many cases like the blast at Ahmedabad, Sahela Masood murder case etc., were solved using call data records alone.<sup>11</sup>

In our case, with all the information about signs of smothering, fabrication of wounds and presence of undigested food in the stomach of the deceased, the investigating officer probed into the CDR of the wife and it was observed that she had active call hours at late night till early morning. The most frequently called mobile number was traced and enquired to learn that the wife had an extramarital affair with another man and they both plotted to intoxicate the husband by alcohol, killing by smothering and fabricating the incident with cut injuries on neck.

A multifaceted investigation by different arms like Police, Doctors and Forensic science officers with the help of information from postmortem examination, verbal autopsy, police interrogation, detection of blood stains and call data records together helped in solving this mariticide.

## Conclusion

Mariticide is another heinous crime existing in the society by losing the trust of love and breaking the promises made at wedlock. As such execution of a perfect crime is a myth and it takes nothing but amalgamation of intelligence in investigation, co-operation between various officers, science, recent and advanced technologies to solve the crimes.

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