

CASE REPORT

Identification of Primary Crime Scene from Secondary Crime Scene through Soil Evidence in a Crime Concealment Case: An Interesting Exhumation Report*Nataraja Moorthy T.**Department of Diagnostic and Allied Health Sciences, Faculty of Health and Life Sciences, Management and Science University, Shah Alam, Selangor, Malaysia***Abstract:**

Currently crime scene investigators are facing many challenges to solve the mystery since the criminals use many techniques during their operations and to confuse the investigations. The confusion becomes more complex whenever missing of persons followed by dead body recovery in the form of crime concealment. The recovered body may be either in open places or in subsoil. The recognition of physical evidence is a vital step during crime scene investigation and the physical evidence can either be big as cot, knife or traces invisible to naked eyes. The examples of trace evidence include bloodstain, hairs, fibers and soil. Some of the investigators underestimated the value of trace evidence and neglected even in the initial stage of investigation that ended with unsolved crime. The case of crime has been presented herewith concealment wherein, a person was murdered in one place (home, primary crime scene) and the body was transported to another area and subsequently buried (dried canal, secondary crime scene). The burial site came to the notice of police who triggered the investigation with the help of forensic crime scene expert, forensic autopsy expert along with revenue officer and solved the mystery forensically. The forensic crime scene expert noticed a clay soil on the body, the only promising evidence that led to identify the primary crime scene and accused. The forensic medicine expert conducted spot autopsy in the crime scene itself and confirmed the act of homicide.

Keywords: Crime Scene Investigation, Exhumation, Trace Evidence, Primary Crime Scene, Identification.

Introduction:

The process of scientific crime scene investigation is not only the mechanical aspects of scene security, scene documentation, and collection of physical evidence, but also importantly demands more dynamic approaches like keen crime scene analysis and hypotheses development through the linkage of the scene, physical evidence and persons and finally the reconstruction of the crime scene [1]. If physical evidence is not recognized and interpreted properly, the value of the physical evidence may be greatly reduced or even lost forever [2-3]. Some investigators underestimated the value of physical evidence such as footprint, palm print, hair, soil etc. and neglected them in the initial stage of investigation process [4-5]. Here again the footprint evidence provides more information than fingerprint in the crime scene investigation and no two footprints are identical [6].

Physical evidence plays a vital role in death scenes wherein the evidence can link the crime and criminal as well as primary and secondary crime scenes. The primary crime scene is the place/area where the incidence of homicide, suspected homicide occurred and the dead body found in this

place/scene. The secondary crime scene is any area or location where there may be evidence of criminal activity outside the primary crime scene. For example, the male owner of a shop asked his girl worker to meet him in his bungalow. After her arrival, the owner raped her in his bungalow and carried her body to a remote area and thrown into a well. The bungalow was the primary crime scene and a well found far away from the bungalow was secondary crime scene. The body may be apparent or concealed. Usually transport the potential physical evidence away from the primary to the secondary crime scene [7]. The investigation on body concealment requires special skill, knowledge, aptitude and attitude. Modern medico-legal death investigation has involved forensic crime scene investigator, forensic medicine expert and forensic scientist. If forensic evidence is not involved during court preceding or wrongfully presented, the judicial system's ability to serve justice is diminished [8]. In case of suspicious death investigation, keen examination of the crime scene and evidence on the body can solve the puzzle in the investigation [9].

Case Report:

This crime incident occurred in Tamil Nadu, India. Some villagers came to police station and alleged that a human finger was found projecting outside from the ground in a dried canal. The information passed on to the superior police officers and revenue officials. In Tamil Nadu state of India, the visit of any of revenue officials (Revenue Inspector, Tahsildar, and Revenue Divisional Officer) is mandatory for all exhumation cases. The deputy superintendent of police and Tahsildar

who visited the scene, requested the service of forensic crime scene investigator, forensic medicine expert, forensic photographer and detective dog squad. The entire team arrived at the crime scene to assist the investigation. After the dog squad process was completed, the forensic crime scene investigator (the author) had examined the scene and documented by notes taking, photography and crime scene sketch. Fig. 1 shows the dried canal as shown by the villagers and arrow indicates the mystery point or body under.

The body was exhumed in the presence of officers, mentioned as shown in Fig. 2. As the exhumation was in progress, unpleasant odour emanated from the burial site and an intact decomposed dead body found under the earth as shown in Fig. 3. A male dead body aged about 55 years old, without any clothing on the body (naked) that buried superficially. An important physical evidence found on the dead body was clay soil stain (fine mineral particles), adhering on the shoulder blade. Since the burial place was a dried water canal, no such clay soil found in the burial area but found only sandy soil in the canal. Undoubtedly, this place is the secondary crime scene and need to identify the primary crime scene. The forensic crime scene investigator had collected the adhering clay soil from the body along with control soil samples and preserved for forensic laboratory analysis.

The medical team conducted spot autopsy on the body and suggested the possibility of strangulation, as the cause of death. The forensic medicine expert explained the presence of continuous ligature mark around the neck and hyoid bone fracture. The

expert also suggested the time since death was more than 36 hours. The police inquiries revealed the identification of dead body and a suspected place was earmarked which is about 5 km from the secondary crime scene. The forensic investigator proceeded to the suspected place, a gardening area just behind the house of the deceased. Examination of a top soil in one point found as loosen, noticed some hairpieces in the subsoil with silt and clay soil, and was preserved. The clay soil collected from the dead body and the soil collected in the gardening area were sent to forensic science

laboratory for soil comparison analysis. The forensic laboratory soil analysis included particle size examination, instrumentation technique, examination under microscope and density gradient tube technique and finally reported that the clay soil collected from the dead body in the secondary crime scene and the clay soil collected in the gardening area behind the deceased house the primary crime scene are similar. Soil comparison analysis is an important component in forensic investigation [10].



Fig. 1: Canal without Water. Red Arrow Indicates the Place of Finger Exposure/Burial Point of Dead Body



Fig. 2: Ongoing Exhumation Process in the Presence of Forensic Crime Scene Investigator (FO, The Author), Forensic Medicine Expert (MO) and Revenue Officer (RO) in the Presence of Deputy Superintendent of Police (DSP)



Fig. 3: Naked Male Dead Body in the Subsoil and Clay Soil Adhering on Shoulder Blade

Discussion and Conclusion:

Crime reconstruction: Based on autopsy and forensic laboratory reports, identified the missing link, no other than the wife and son of the deceased. Because of family issues, the wife and son of the deceased have strangled him in their house. After the death, the dead body was moved from the house to the gardening area, behind the house and buried. Next day, the body was removed from the burial place and transported to the neighboring village canal area and buried superficially and hence one of the fingers found exposed outside, as noticed by the villagers. The inspector of police arrested the wife and son of the deceased based on the physical evidence that linked the primary and secondary crime scenes. The forensic medicine expert, forensic crime scene investigator and the forensic science laboratory analyst presented their testimony in the sessions court. The Honorable Judge appreciated the use of forensic physical evidence, and finally the case ended with conviction.

The forensic crime scene investigator, who identified the soil, the trace evidence found on the

body and linked the primary and secondary crime scenes, led to the identification of accused. The forensic medicine expert opined murder for the cause of death based on autopsy findings in the crime scene itself. Autopsy examination in the crime scene would give better idea about the injuries and causes of death and ease the investigation process [11]. The detective dog had indicated the area of the crime commission. Thus, it is the duty of any crime investigator to understand the value of forensic physical evidence in the secondary crime scene and to apply appropriately for successful identification of primary crime scene and perpetrator.

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