

THE IMPORTANCE OF ENVIRONMENTAL FACTORS IN VISUAL IDENTIFICATION

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Abstract: *Forensic medicine is dealing with medical knowledge and methodologies for legal purposes. Identification is a field of study in forensic medicine is a comparative study between ante-mortem and post-mortem data. Its core stone is the autopsy, with which the identification process starts. Forensic medicine has played a very important role in the process of the identification of victims in mass disasters, e.g. plane crashes and court cases where insurance and inheritance issues have to be settled. A forensic identification can be requested for different reasons: affectivity, monetary, marriage and burial reasons, for statistics and official records and for criminal purposes.*

Keywords: forensic pathologist, forensic identification, autopsy.

INTRODUCTION

In 1989, the forensic pathologist and forensic scientist Luke Tedeschi said: "to investigate a medico-legal case without performing an autopsy can be compared to reading a mystery novel with last page torn out" Forensic pathology is probably the most important field within forensic science. Its major tasks are to establish the type of death (e.g. if it is non-violent or violent), the cause of death, i.e. the actual injury or disease that lead the death (e.g. a gunshot), the mechanism of death (e.g. death because of severe blood loss), the manner (e.g. suicide), the time of death and finally the identification of the deceased.

MATERIAL AND METHODS

Visual identification is the most common worldwide used non-scientific presumptive identification method of dead bodies. It is cheap, easy and requires less time than many other methods and it is used when no scientific identification methods are available or as a step in the identification process. It is a generally very good method when the body is fresh and intact and there are people familiar with the deceased who can identify it. Unfortunately this method has its limits; it becomes very difficult or even impossible to apply when there is a fire with charred remains, an explosion, severe decompositions, severe injuries, animal depredation responsible for feature changes on the body, post-mortem mutilations/dismemberment,

mass disasters like air crashes and earthquakes, or when there are whole families eradicated and there is no one to identify the body.

There are three arguments based on scientific reasoning making visual identification a questionable and unreliable method.

- first, the external conditions for visibility may be poor; i.e. low light, poor weather, e.g. fog, haze, rain etc.
- second, several research studies reports have thoroughly shown that humans in general have poor abilities to identify, even if the visibility condition is proved to be good.
- third, the procedures which are used to make the identification have many times especially in crime history been biased.

Relatives have mistakenly given a positive identification because the authorities told them that the dead body is supposed to be that one, or family have identified their beloved with closed eyes members because of distress and shock. There have been occasions where the family members deny accepting that their beloved is dead and therefore in this state of psychological denial give a negative identification. Other factors that can make the visual identification quite hazardous are e.g. when a body is covered with blood, heavily disfigured or decomposed. As visual identification is not considered a positive identification method should be confirmed by scientific identification methods.

RESULTS AND DISCUSSION

In many occasions when primary biometric trait are missing e.g. fingerprints, palm prints, face and iris are missing, soft biometric traits like for scars, marks and tattoos can instead give some identifying information.

- **Scars**

A scar is a lesion in the dermis and it remains on the skin for the rest of the person's life. It is a result either of a surgical intervention, self-induced or accidentally acquired. A scar can give important pieces of information about the deceased; can be self-inflicted in a suicide attempt, a previous surgery, or a symbol indicating religious beliefs. Above all a scar is a mark which friends or close family members usually remember and constitute a very important identification tool in visual identification.

- **Marks**

Another assisting tool to help the identification is the birthmarks. Here we can include for example; moles, black or brown spots or any spots that can be recognized by the family as specific for the deceased.



Photo 1: Fresh scar

- **Tattoos**

A tattoo is an ineradicable mark or a larger modification of the dermis of the skin and like a scar it can accidentally or intentionally be acquired. It can be professionally done or it can be an amateur work, e.g. done in prison by prisoners. Medical reasons can also be the cause of tattoos e.g. radiotherapy markings. Tattoos very often have information as, names, dates, blood types, military service records. They can give a clue to gang memberships, religious beliefs, the years spent in prison etc. Like with the scars, these tattoos are often remembered by friends or close family members and therefore of great help in the identification process.



Photo 2: The appearance of the body-tattoos and pierced tongue



Photo 3: Old tattoo, left forearm

CONCLUSIONS:

Despite the rapid increase of new forensic scientific technology methods, visual identification is the most common world-wide used identification method. It is cheap, easy and used when no other method is available. It has its limitation as it can only be used when the body is fresh and intact. When there are severe alterations of the body this method are not

appropriate. Visual identification has other disadvantages which put limitations to its accuracy and reliability: The visibility may be poor, research have shown that the general ability in humans to identify is poor leading e.g. innocent to convictions the biased identifications which have happened repeatedly in crime history, the distress and shock by family members have resulted in negative or positive identifications.

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