

Review Research Paper

Unknown Dead Bodies: Problems and Solutions

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Abstract

Identification means determination of individuality of a person, or, in the case of the dead, "individualization by attribution of birth name or other appropriate name to human remains". Trying to establish the identity of unknown dead bodies always pose a challenge to the police, and taxes the resources of the most experienced forensic experts. The usual reasons of non-identification of the dead body are: no proper history available, body often highly decomposed, face crushed or destroyed, mutilation/dismemberment of body parts either by animals or vultures when disposed in isolated lonely places or when the bodies are recovered in skeletonized form, etc. Mass disasters like Earthquakes, railway accidents, tsunami's, bomb explosions, air-crash, etc. are other common instances where the problem of identification arises. Another important reason for non-identification of the dead body is the lack of interest by the police to properly work out the case. This paper aims at understanding the principles of cadaver identification and the problems faced by the relatives, police and the autopsy surgeon in establishing the identity of the dead, particularly, the unknown/ unidentified bodies.

Key Words: Unknown bodies, Identification, DNA profiling, Cause of death, Negative identification

Introduction:

Identification is the act of identifying a person. It means determination of individuality of a person. [1, 2] It can also be defined as "individualization by attribution of birth name or other appropriate name to human remains". [3] Establishing the identity of the unknown dead bodies always poses a challenge to the police and to the forensic experts. The questions of identification of an individual are of everyday occurrence in life, both in civil and criminal cases. [4, 5] Identity has to be established even after death to perform the last rites of the remains. The golden rule for identification is "Sooner is better for victim identification".

It is a fact that the chances of identification are inversely proportional to the time since death. The greater the time since death, the lesser are the chances of correct identification.

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The gravity of the problem of identification is further enhanced and taxes the resources of even the experienced Forensic experts when the bodies are recovered in skeletonized form/ decomposed state or in mutilated state. [5] Mass disasters like earthquakes, bomb explosions, air-crash, railway accidents, tsunamis, etc. are other common instances where problem of identification arises. [1, 6] Proper recovery and identification of human remains is essential for the healing of families and even whole communities. [7]

Forensic investigation of human remains has two objectives. The first is to recover and examine the remains for criminal investigations, including establishing the cause and manner of death; the second is to identify the remains and, if possible, return them to the family of the dead person. [8]

Identification is a process that involves one or more of the following means:

- Visual and other customary means of identification. This usually involves relatives or acquaintances of the missing person(s) viewing the remains
- Systematic comparison of ante-mortem and post-mortem data
- Scientific/objective means which would involve matching of:
 - Post-mortem and ante-mortem dental radiographs;

- Post-mortem and ante-mortem fingerprints;
- DNA samples from the human remains with reference samples;
- Other unique identifiers, such as unique physical or medical traits, including skeletal radiographs,
- Numbered surgical implants/prostheses. [9]

Problems:

Mutilation of the dead body may be done by criminals to destroy all traces of identity or to facilitate the disposal of the body. [1] The various methods of attempted disposal of the body by the criminals are: [6]

- 1) Mutilation (slashing, gouging, pounding or other attempts at regional disfigurement or obliteration)
- 2) Dismemberment (so that only widely scattered parts are found)
- 3) Use of corrosives for specific or general destruction
- 4) Burns

Another important challenge for the forensic expert is to find out the cause/ manner of death in unknown dead bodies as there is very little or no proper history available, body may often be highly decomposed and the police may not be interested in properly working out such cases.

Identification can be done by matching information from the deceased (physical features, clothes, artifacts etc.) with information from individuals who are missing or presumed dead. Direct comparison of the dead body by the relatives of the deceased according to the memory or available photographs, is the primary method of identification. [10]

But this method is prone to errors and may lead to incorrect identification thus leading to serious embarrassment to the relatives, and may put the relatives in legal difficulties. Even where physical characteristics are matched for identification, there is great danger of ambiguity; an incorrect identification of a firefighter was announced based on a gold necklace and a rare congenital malformation of a neck bone. [11]

So, this kind of identification should be supported by some scientific methods. The early work of police, non-specialists in managing the dead (especially proper recovery from the scene, documentation and proper methods of storage etc.) will determine the success of future identification by forensic specialists. [10]

Injuries to the deceased especially on the face, or presence of blood, vomitus, fluids, or dirt, will increase the chance of mistaken

identification. In cases of mutilation of the dead body any separate body part which proves that a person is dead should be managed as though it is a whole body. [10]

Problems Related to the Public:

The public faces a lot of reluctance from the mortuary attendants when requested to show the dead body repetitively to the relatives.

The act of identification of a dead body in itself is a very distressing situation for the relatives and they have to be handled sympathetically, and their emotions as well as the religious beliefs have to be kept in mind while showing the dead bodies.

They have to be told about the incident, site from where the dead body or body parts were recovered, belongings of the deceased and any other relevant facts pertaining to the dead body so that proper identification is possible. It is usually customary to allow only 2-3 relatives or neighbors of the deceased for identification process and usually one of the relatives decides whether it is their relative's body or not.

This process usually ends in wrong identification, especially when the body is in advanced stage of decomposition or is skeletonized, or when the body is identified based on personal artifacts, or there is massive trauma to the head and face.

Sometimes deliberate refusal by the relatives of the dead to identify their relative may be due to socioeconomic reasons – poverty/ drug addict/ bad character, etc. All the above mentioned factors when combined will result in not recognizing their own relative or wrongly recognizing somebody else as their own relative.

It is on records that wrong identification has resulted in suspension/ termination of services of doctors and/ or the police personnel. So it is of utmost importance to make every effort to establish the identity.

Some of the solutions for the problems faced by the public are:

1. Proper storage facilities like cold chambers/ice to decrease the rate of decomposition so that the public has a larger time period to identify their relatives.
2. Public to be treated sympathetically and their emotional state as well as the religious beliefs to be kept in mind while showing the dead bodies 10 (**manual**)
3. Be allowed to view the body as many times as they want under the supervision of mortuary staff, and it should be arranged quickly.

4. Ask questions as to how they have recognized the body and this will give a fair idea to the forensic expert/ mortuary attendant of the basis of identification 10. **(manual)**
5. Photography of the unknown dead body should be arranged quickly and as soon as possible after arrival at mortuary so that facial features and other identification data are relatively well preserved in photographs. These photographs are handy, less time consuming to show to the relatives and can be shown any no. of times.
6. These photographs will possibly be the best information available in mass fatality for identification purposes.

Problems Related to the Police:

One major problem of the police is that they are always overburdened and do not have enough time to properly work out the unknown cases. Another problem is the inadequate training / lax attitude of the police personnel in handling the unknown cases. Punjab Police Manual states minimum time limit as 72 hrs before which a postmortem examination of the unknown dead body is not to be done, but it does not specify the maximum time limit and this serves as an excuse to “delay the post mortem”.

All of these inadvertently result in further decomposition of the dead body, thus again decreasing the chances of correct identification.

Sometimes there is deliberate delay on the part of police officials to get the postmortem done so that the body gets decomposed and the cases of murder may be passed off as simple cases of natural death and some ulterior motive of the police official is served.

Taking and preserving fingerprints, publishing photographs in dailies/ newspapers, pasting pamphlets outside mortuaries/ hospitals/ police stations/railway stations, etc. are some of the routine steps undertaken by the police in a bid to trace the unidentified but these are cumbersome, time and money consuming so not preferred by the police or are often bypassed.

Besides these, advertisements in the local TV channels are aired and a thorough enquiry is made in the locality in which the body was found. All these formalities require a lot of time and coordination, and the police usually request a postmortem examination only after completing the above mentioned formalities to avoid unwanted allegations by the relatives at a later date when the body is identified, but this process itself decreases the chances of correct identification.

Some of these problems may be solved by simply taking the photographs of the deceased and then getting the postmortem examination done after 3 days. Prior to photographing the dead body, it is advisable to assign a unique reference number sequential to each body or body part and the same should be visible in all the photographs. [10]

These unique reference numbers must not be duplicated. These must be written on a waterproof label which should be securely attached to the body or body part. A waterproof label with the same unique reference number must also be attached to the container for the body or body part (e.g., body bag, cover sheet or bag for the body part).

The body should be cleaned sufficiently to allow facial features and clothing to be properly represented in the photographs. The photographs should include at least:

1. A full length clear view of the body, front view;
2. Whole face; and it should fill the entire picture;
3. Any obvious distinguishing features;
4. Photographs must be taken close to the dead body;
5. The photographer should stand at the middle of the body when taking the picture, not at the head or feet;
6. The photograph must include the visible unique reference number, to ensure that identification made using the photograph matches the correct body, and a scale, to calculate the size of features in the photo.

If circumstances permit, or at a later time, additional photographs can be included with the unique reference number of the following:

- Upper and lower part of the body;
- All clothing, personal effects, and distinguishing features [10]

Solution to the rest of the problems faced by the police lies with the senior police officials. They can arrange for training of their juniors in dealing with the unknown dead bodies, increase efforts to identify the victims, coordinate with other state agencies in identifying the deceased, etc.

Problems Related to the Autopsy Surgeons:

One important problem faced by the autopsy surgeon dealing with such cases is trying to establish identity through the external features in a decomposed/ mutilated body. [12]

In order to decrease the incidence and degree of decomposition, proper preservation

measures are required on arrival of the dead body and this usually is not a problem unless there is a massive influx of dead bodies from a disaster site. Usually mortuaries in India are equipped to handle 6-12 bodies at a time but if all the chambers of the cold storage are full then it is the unknown dead bodies which are put out in the open to accommodate known dead bodies.

Even if accommodating the bodies by placing them one over the other, this may distort the face of the victim thus may lead to non identification of the victim.

If there are a number of unknown dead bodies then again the problem of plenty arises; resulting in neglect by the mortuary staff, or cursory examination by the doctor. The solution to this problem is to anticipate need for refrigerated holding areas.

Mobile or portable refrigeration units (refrigerated containers or trucks) should be available on call or use of other preservative measures like Calcium hydroxide, formol and zeolite should be available in the mortuary so that if need arises one can use these to preserve the body.

Another, though less common, problem faced by the doctor is the accidental exchange of the unknown dead bodies or conducting post mortem examination on the wrong body.

Cases are on record where there was accidental exchange of unknown dead bodies as there is no one to identify the dead body, police personal paying least attention in recognizing the body which they had brought from the scene of crime, and the mortuary staff paying minimum attention towards the unknown dead body, for obvious reasons.

Then again, the disease status of the unidentified person poses a problem for the surgeon. May be he/she was suffering from TB , HIV +ve, hepatitis B/C and in these type of cases extra precautions would have to be taken while conducting post mortem, all the instruments would have to be sterilized after post mortem; disposal of such cases also poses a problem.

The autopsy surgeon, besides doing the routine efforts as described above, also helps in preserving samples for analysis for positive identification (DNA analysis), or get the body X rayed, identification through photographic superimposition or medical implants/dental records, etc. Blood grouping of the individual will help in negative identification. Most of these methods require ante-mortem records for comparison.

For identification through dental records and DNA analysis, investigators have to have some idea or guess as to who the body might be in order to search for ante-mortem records or relatives. For DNA testing, any biological sample known to have come from the deceased can be used to get an ante-mortem profile, if it can be salvaged properly.

Biological samples such as samples from surgery or donor samples from the deceased's tooth or hair brush can be used to obtain ante-mortem records, as long as only the deceased used these items.

DNA identification can also be made if both parents of the deceased are alive and claim the body as to be theirs or if the deceased had a child. If the deceased had a child, the child and the child's other biological parents can be matched to the deceased in much the same way. DNA analysis is integral to the accurate identification of human remains from mass disasters. Forensic DNA typing allows the identification of any biological sample and the association of body parts, as long as sufficient DNA can be recovered from the sample(s).

This is true even when the conditions are such that the victims' remains are fragmented and the DNA degraded. [13]

Dental identification may be based on pathological conditions, disturbances of tooth eruption, malocclusions and on dental treatment. The identity of an individual may be established on the basis of the uniqueness of concordant ante and postmortem dental features.

A comparison between ante mortem records and postmortem findings may thus often lead to identification or provide convincing proof to rule out a particular identity. [14]

Using medical implants to make a positive identification does not require any ante-mortem records beyond the manufacturing data and serial number associated with the implant. Pacemakers and other surgical implants, such as artificial hips and the like, have serial numbers etched into them.

And all surgical implants require documentation of insertion in a database, any medical implant found in a dead body can be traced to the manufacturer, the doctor who implanted the device, the hospital where it was done, and of course the name of the person who received it. Such serial numbers are often used to determine the identity of an unknown corpse.

Be humane and treat unknown sympathetically. Pay extra attention to the unknown as they have no one to take care of them

Conclusion:

A man is born with an identity and deserves to die with the same. This is a fundamental right of being born a human. However, due to natural calamities, mass disasters, intentional/unintentional acts of fellow human beings, a number of instances of “unidentified bodies” come to fore.

Advancement in the field of computers, genetic engineering including DNA analysis, etc. have lead to development of newer methods of identification. What is eventually required is a sympathetic, humane and scientific approach to the whole problem to find a suitable solution for establishing the identity of the dead.

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