

## Autopsy and Dissection: The Ethical Dilemma

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### Abstract

The word autopsy is derived from the Greek word autopsia: "to see with one's own eyes" and the word Dissection is derived from Latin word dissecare: "to cut to pieces"; also called anatomization. Ethics in medicine focuses mainly on a doctor patient relationship and is referred to a patient alive. But 'cadavers' which are used in medicine and are an integral part of medical education, also have an important ethical value that necessitates a reverential attitude towards them. An autopsy which is known as a post-mortem examination or necropsy is performed by pathologists to determine the cause of death. They are also utilised for teaching and research purposes in medical colleges. A forensic autopsy is also a medicolegal autopsy. Forensic autopsies have legal implications and are performed to determine if death was an accident, homicide, suicide, or a natural event. Forensic autopsy or Medicolegal autopsy is performed as per the orders of the judiciary performing the investigation of sudden and unexpected, suspicious, obscure, unnatural, occupational or criminal deaths without the consent of relatives. Dissection of human cadavers is compulsory for medical education as it provides a rational and logical way for learning the structure of the human body, an efficient tool for surgeons to perfect their surgical skills and for researchers to carry out their studies.

Ethics regarding a 'cadaver' may seem strange or unusual but should be held in high esteem. The use of the cadaver within the activities of autopsy and dissection must be done with deep respect for the deceased, acknowledging the cadaver's intrinsic moral-ethical value. The person's right to confidentiality extends after death too. Hence autopsy findings are subject to professional secrecy; and this is mandatory in case of forensic or medicolegal autopsy. The cadaver should be treated with utmost respect by staff and students. At the end of the education process, the cadaver used for dissection should be given a proper and decent memorial service.

**Keywords:** *Ethics; Medicine; Doctor Patient Relationship; Cadavers; Medical Education; Dissection; Autopsy; Forensic Autopsy; Teaching and Research Purposes; Legitimacy; Surgical Skills; Researchers; Respect; Memorial Service*

### Introduction

Ethics in medicine focuses mainly on a doctor patient relationship and is referred to a patient alive. But 'cadavers' which are used in medicine, are an integral part of medical education, also have an important ethical value that necessitates a reverential attitude towards them.

Dissection of human cadavers is compulsory for medical education as it provides a rational and logical way for learning the structure of the human body, an efficient tool for surgeons to perfect their surgical skills and for researchers to carry out their studies. The dissection of the human body represents a procedure during which the body is sectioned in order to emphasize and study the topographical anatomy and the structure of its components [1]. As cadavers are difficult to come by, a number of medical schools are using modern technology to teach Anatomy like permanent models of dissection or computer programs but these methods can never replace the human cadaver in terms of imparting education and surgical skills.

All these procedures require an invasive manipulation of the cadaver which can harm the integrity of the person involved and here arises the ethical predicament; a struggle between the need of these procedures, on one hand, and the right to dignity on the other hand.

### Discussion

Autopsy or post mortem examination, also referred to as 'final medical examination' is another procedure where the cause and manner of death have to be ascertained and here the same ethical dilemma arises. A pathological autopsy helps to confirm a precise cause of death and is helpful in enhancement of medical care. A medico-legal (forensic) autopsy on the other hand is executed as a demand of the judiciary in cases of death occurring in suspect circumstances (homicide/suicide/accident) [2]. As these autopsies are also performed in medical institutions they also contribute to learning.

### Respect for the cadaver

Ethics regarding a cadaver may seem strange or unusual but should be held in high esteem for a number of reasons.

Even after death a cadaver upholds its identity. The treatment meted out to a human cadaver impacts the way we treat life and the way we would treat a living patient; treating it simply as 'human remains' indirectly implies lowering the worth of the person alive. Thus, the human body, even sans life, has an inherent value.

Also, the memory of the departed should always be respected. Disrespect to the cadaver would mean disrespect to the deceased itself.

Third, the near and dear of the deceased have suffered a painful and permanent loss whose void can never be filled, and this aspect should never be disregarded, hence it is a moral - ethical obligation to respect their grief.

Lastly every cadaver possesses a religious implication like resurrection or rebirth or an 'After Life'. The regard for the deceased is an "exercise" of the respect we owe to the resurrected human body. Hence respect for the cadaver also possesses a moral religious significance and disrespect would mean disregarding the entire humanity [3].

All these, form the basis of the respect we owe to the cadaver and an autopsy or dissection carried out on it would appear to be essentially contradictory to the above moralities. Nevertheless, execution of these procedures in stringently meticulous settings can obtain moral-ethical and even legal acceptance.

The decisive element that would impart both moral and ethical acceptance to these manoeuvres is their outcome. If the outcome has helped to convict the right person or to reveal diagnostic or therapeutic errors which can be avoided in future or to train future physicians and to carry out research activities, then the procedures would be accepted and considered legitimate.

If, on the contrary, an unwarranted defacement of the cadaver or a manipulation that intrudes on the accepted moral and ethical principles is achieved through autopsy or dissection, the procedures are ethically incorrect and may even warrant disciplinary action [4].

There is a considerable difference between a human cadaver autopsy and dissection.

During autopsy the invasive manipulation of the body is only limited and brief and after the procedure, the body is given to the family 'restitutio ad integrum' (restoration to original condition) for the traditional funeral services.

Here the principle of individual autonomy is secondary as it becomes a legally binding procedure. The request of the deceased (in life) or of the family not to be autopsied, cannot overcome the legal necessities.

For pathological autopsy the law states that it "is obligatory in all deaths that occur in hospital and where the confirmation, specification or completion of clinical diagnosis is needed, including the decease of children under one year old, irrespective of the death place, as well as maternal deaths." The procedure can be evaded only in exceptional situations and in very well-established conditions, "In case of patients with well-known chronic diseases, well investigated, if the family members have no doubt about the disease and the applied treatment and take responsibility in writing for this, the chief of hospital together with the head of the department where the deceased was hospitalized, the doctor and the head of the forensic department can agree under signature that the autopsy is not to be performed".

A forensic autopsy on the other hand is compulsory and legally binding without any exception, in cases of suspected suicide, homicide or accidents since forensic inferences cannot be based on an incomplete examination and it has to be carried out within 72 hours by a forensic expert [5].

All autopsies should be accomplished with an essence of respect due to the cadaver - as a former alive person. Even if the person is deceased, we consider that art. 3 of the Law of Patient's Rights is still applicable, i.e. "the patient has the right to be respected as a human being, without any discrimination". The law also emphasizes that medical information regarding the patient be kept confidential "even after the patient's decease" and the forensic autopsy be performed by "respecting the medical ethics and the deceased person's dignity" [6]. The professional secret extends to the family also; even if they are kept in the loop about the autopsy findings, so that the post mortem image of the patient is not harmed in any way.

Instructions regarding confidentiality are more stringent in cases of forensic autopsy, so that there is no bias in the judicial inquiry.

Art. 14 of the Code of Medical Deontology states that: "The professional secret is mandatory, with the exception of the situations stipulated by law". For example, the discovery at autopsy of an infectious disease must be reported in order to prevent the potential impact on public health. Also, if essentials of crime are found during a pathological autopsy, the institutions in charge have to be informed and the autopsy has to be carried on by the forensic expert [7].

As per law, medical students can be involved in autopsy in autopsy as law states that the "right to manipulate the human cadaver for teaching purposes" but all guidelines have to be adhered to by the students too, and the teaching staff have to explain rules to the students and to elucidate the absolute necessity of respecting them. It is recommended to obtain permission of the family of the deceased if the cadaver is to become a teaching entity at the time of autopsy.

This is not the case with anatomical dissection. Here there is an irreparable change of the cadaver; and the next of kin do not get to perform the last rites. Hence the moral and ethical aspects of dissection are diverse from those of autopsy.

The best method of learning Anatomy is by dissecting human cadavers. Other activities like endotracheal intubation, surgical techniques, gathering body parts for permanent anatomical models etc. can also be learnt on the cadaver [8].

Cadavers used by medical institutions are frequently unclaimed bodies and occasionally they are donated by the next of kin of the deceased (as per the wishes of the deceased) to teaching institutions. As the number of doctors graduating every year is increasing and the number of cadavers received for their training is insufficient. Unclaimed bodies are difficult to come by. Hence voluntary Body donation is the need of the hour.

In India, the 'Anatomy Act' was passed in 1949 and was implemented by all Indian states. This act provides for the supply of unclaimed bodies to medical and teaching institutes for the purpose of anatomical dissection and research purposes. "An Act to provide for the supply of unclaimed bodies of deceased persons (and for donation before death by a person of his body or any part thereof after his death) to hospitals and medical and teaching institutions (for therapeutic purposes or) for the purpose of (medical education or research including) anatomical examination and dissection" [9].

Body Donation is a generous act and is a gift for health care students and researchers to progress in the field of medicine. Teaching Institutions that receive cadavers can carry out activities like embalming the cadavers for dissections, provide anatomy and surgical departments with teaching materials; Gross Anatomy Museum specimens can be prepared and displayed; skeletons as well as histology slides can be prepared.

The moral-ethical point of view - When a person voluntarily of his own accord and free will decides to donate his body during his lifetime, for furtherance of medical education and scientific progress, it is evidently the best accepted cadaver source. The conditions to be taken into account are: a) Person should be an adult of sound mind b) He should give his informed consent in writing. c) The possibility of revoking at any time the given consent. d) The consent unaltered by moral or physical constraint. e) The existence of a legalized document (declaration before a public notary, donation contract, will of the deceased) which stipulates that the donation is done with a humanitarian, altruistic goal, without pursuing a material or other type of benefit.

If the deceased did not express, during lifetime, and the wish to donate his/her body and a donation is made by the family/legal representative on his behalf, then justification of such a donation can be to either avoid expensive memorial services or it can be the family's goal to propose a constructive value to their loved one. Such a donation is considered inapt from an ethical point of view [10]. Nevertheless, such donations are honoured when there is a dearth of cadavers. Voluntary body donations are based on family consent because after decease, it is their decision to donate or no, hence it is necessary to have a written consent from at least one major member of the family or relatives (in the following order: husband, parent, child, brother, sister).

Unclaimed cadavers and of those without family is least ethical way of cadaver procurement. because the deceased person's consent concerning the use of his/her body for teaching purposes cannot be taken for granted. The reasons which determine the legal acceptance of such a "cadaver source" are definitely not altruistic; but are founded on the acute requirements for teaching purposes. Hence the best morally accepted cadaver source for dissection would be by voluntary donation of the person's body during lifetime. The fundamental principle of autonomy is respected; the incentive of the act is strictly altruistic (contribution to the scientific progress) [11].

Cadavers not suitability for donation: 1. Decomposed body. 2. Morbid Obesity 3. Extreme emaciation 4. Suicide or homicide. 5. Death due contagious diseases HIV/AIDS, hepatitis B and C, active tuberculosis, syphilis due to the epidemiologic hazard that making them inappropriate for the medical training.

In principle, forensic cadavers should not be used for teaching and research activities, as there is always the likelihood that some new inquiry could arise. But when a written consent is obtained from the prosecutor that the case has been closed, the cadaver can be used for teaching and research purposes. Also, in case of unclaimed bodies, the prosecutor has to give a written confirmation that all steps have been taken to identify the deceased and to trace the family [12].

The cadaver should be treated with utmost respect by staff and students within the dissection hall or at the time of autopsy, without any prejudice. It should be used for only those manoeuvres for which explicit consent has been obtained. At the end of the education process, the cadaver should be given a proper and decent memorial service by the institution, preferably and if possible, with the family in attendance [13].

### Conclusion

Ethics regarding a 'cadaver' may seem strange or unusual but should be held in high esteem. The use of the cadaver within the activities of autopsy and dissection must be done with deep respect for the deceased, acknowledging the cadaver's intrinsic moral-ethical value. The decisive element that would impart both moral and ethical acceptance to these manoeuvres is their outcome. If the outcome has helped to convict the right person or to reveal diagnostic or therapeutic errors which can be avoided in future or to train future physicians and to carry out research activities, then the procedures would be accepted and considered legitimate.

The person's right to confidentiality extends after death too. Hence autopsy findings are subject to professional secrecy; and mandatory in cases of forensic autopsy.

In the case of autopsies for teaching purposes, the students also have to comply with these rules, under the strict supervision of teachers.

Regarding the dissection activities, the main ethical issue is the one of body procurement. From the moral point of view, it would preferable that these cadavers be donated voluntarily, explicitly, on personal behalf, based on altruistic reason, by the person him/herself. Unclaimed cadavers and of those without family is least ethical way of cadaver procurement. because the deceased person's consent concerning the use of his/her body for teaching purposes cannot be taken for granted.

The cadaver should be treated with utmost respect by staff and students. At the end of the education process, the cadaver used for dissection should be given a proper and decent memorial service.

### Competing Interests

The authors declare that they have no competing interest.

### Authors' Contributions

SPS drafted the manuscript, performed the literature review & SR assisted with writing the paper.

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