



MEDICAL AND LEGAL USEFULNESS OF CADAVER DISSECTION

Dr. Sharadkumar Pralhad Sawant* and Dr. Shaheen Rizvi

Department of Anatomy, K. J. Somaiya Medical College, Somaiya Ayurvihar, Eastern
Express Highway, Sion, Mumbai-400 022.

Article Received on 20/02/2015

Article Revised on 14/03/2015

Article Accepted on 06/04/2015

***Correspondence for**

Author

**Dr. Sharadkumar Pralhad
Sawant**

Department of Anatomy,
K.J. Somaiya Medical
College, Somaiya
Ayurvihar, Eastern Express
Highway, Sion, Mumbai -
400 022.

ABSTRACT

Dissection is not only a skill, but also an art that is identified as the signature of a surgeon. Besides the surgeon, all medical practitioners need to perform procedures such as the draining of an abscess, removal of a cyst, venesection, and so on. The initial learning seat for this marvellous art is the anatomy dissecting room. Dissection of a dead body is a time honoured part of medical education as a part of learning human anatomy. However, the use of human tissue for research and the use of human cadavers for teaching and training purposes are

surrounded by ethical uncertainties. This paper emphasizes both medical and legal usefulness of cadaver dissection, revealing the specific forms in which the body of the deceased person can be used for teaching and scientific purposes. It is aimed at setting some nominal guidelines on how to act in an ethical way in procuring cadavers for dissection by medical students as well as for research purposes, These rules and regulations are recommended for maintaining the highest standard of dissection as well as for maintaining the dignity of the cadavers. It also deals with the moral-ethical values to be placed on the cadaver, pointing out the reasons for which a respectful attitude towards the cadaver is required.

KEYWORDS: Dissection, Surgeons, Medical Practitioners, Surgical Procedures, Research, Cadavers, Human Anatomy, Moral-Ethical Values, Respectful Attitude.

INTRODUCTION

Most of the moral-ethical debates focus mainly on the person alive, such an approach regarding the dead human body may seem odd. However, a dead person's body has an intrinsic ethical value that requires a respectful attitude towards it. The ethical dilemma appears when an invasive manipulation of the cadaver is required.

The dissection of the human body represents a procedure during which the body is sectioned in order to study the topographical anatomy and the structure of its components. Such a procedure represents an important part of medical education; the knowledge of anatomy thus acquired contributes decisively to the specialized training of physicians in general and of the future surgeons in particular. Nowadays, there is a trend to give up dissections for teaching purposes in several medical schools and instead utilize computer programs (Animated Dissection of Anatomy) but these methods cannot replace the cadaver dissection which is the best method for anatomy teaching, especially in the case of specialists in surgery fields.

Why is it important to respect the human cadaver?

Firstly, Indirectly, the way we treat the human cadaver influences the way we treat the person alive; to treat the dead body as a simple carcass, would mean implicitly to lower the evaluation standards applied to the person alive.

A second argument takes into account our desire to respect the memory of the deceased. Disrespecting the cadaver would mean in a way to disregard the deceased person him/herself. Thirdly we should realise that - a family has suffered a painful and irreversible loss. An improper attitude towards the cadaver would mean thus disregarding those close to the deceased.

Last but not least, we should also have in view the moral-religious significance of the human body. The resurrection into "After Life". From the religious point of view, disrespecting the human cadaver would suggest not only an unfit moral-ethical attitude towards the deceased person, but also one that would disregard the entire human existence.

Performing dissection on a human cadaver would seem to be fundamentally against these principles, which are the basis of the respect we owe to the human body. However, performing dissection in strictly controlled conditions can receive acceptance and even moral-ethical and legal compulsoriness.

DISCUSSION

All cadavers which are accepted for medical education purposes, be it for dissection or research purpose, are all governed by the **Bombay Anatomy Act of 1949**, whether they are voluntary donations or unclaimed cadavers.

Modalities For Accepting Cadavers

The best morally accepted cadaver source for dissection would be by voluntary donation of the person's body during lifetime. Thus the fundamental principle of autonomy is respected; the motivation of such a gesture is strictly altruistic: training the future medical staff and contribution to the scientific progress.

The conditions to be taken into account for such a donation are

- Adult person, with full exercise capacity
- Informed consent, in writing, given freely
- The possibility of revoking at any time the given consent
- The consent unaltered by moral or physical constraint
- The existence of a legalized document (declaration before a public notary, donation contract, will) which stipulates that the donation is done with an humanitarian, altruistic goal, without pursuing a material or other type of benefit.

A second way of body procurement for dissection is the donation made by the family/legal representative. In this case, the deceased person did not express, during lifetime, the wish to donate his/her body for teaching purposes, but the family wishes to make this gesture, exercising thus the right to make a "decision by substitution" on behalf of the deceased person.

The motivational analysis is the key for deciphering the morality of such a gesture. The reasons can be material (e.g. high funeral expenses) or it can be the family's desire to offer a positive value to the death of the loved one.

An acceptance of such a donation "on behalf of someone else" cannot be considered valid from ethical point of view.

Unfortunately, as nowadays voluntary donations are rare and there is a "demand" that exceeds the "supply" in this field, frequently such "Greek gifts" are received, ignoring the moral-ethical reasons.

When body donation is based on family consent, there should be

- The necessity of written consent from at least one major member of the family or relatives (in the following order: husband, parent, child, brother, sister)

- The inadmissibility of cadaver donation if during lifetime the deceased person expressed the option against such a donation.

The last - and most doubtful from moral-ethical point of view - modality of procuring the cadaver for dissection is the one of unclaimed cadavers and of those without family. The deceased person's consent regarding 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; they are based on the acute necessity of procuring cadavers for teaching purposes - most of the times this being the only available source.

Suitability for donation

As the donated body is going to be utilised for studying the normal anatomy of the human body, some bodies may not be suitable for the same and may have to be rejected. Thus procuring of cadavers for teaching purposes is limited by certain factors. These are

- Forensic cadavers (post mortem and medicolegal cases) should not be used for teaching purposes, because there is always the possibility that new investigation data could emerge
- Medical grounds e.g. the cadavers which are carriers of contagious diseases like tuberculosis or AIDS or HbS Ag (Australia Antigen) cannot be used for dissection purpose, due to the epidemiologic risk that makes them inadequate for the medical training activities.
- Body without skin intact – Bed sores or skin diseases like psoriasis etc.
- Decomposed / extremely obese / extremely emaciated body.

It is important to mention that the use of the deceased person's body should be strictly within the mandate to the family through the Bombay Anatomy Act, being allowed only those manoeuvres for which they give their explicit consent.

At the end of the medical training process, if there is a possibility to use the dissected cadaver for other teaching (obtaining skeletal parts or other permanent anatomic models) or scientific purposes the family has to give their consent, in writing.

The remains of the body (after the educational process) will be the object of a final deed of respect: proper funeral services, with the possible participation of the family and/or of the students who benefitted from this cadaver. These final acts must be carried out by the medical institutions that have used these cadavers for teaching purposes.

CONCLUSIONS

The use of the cadavers for dissection must be done with profound respect for the deceased person. Regarding the dissection activities, the main ethical issue is the one of body procurement. From the moral point of view, it would be preferable that these cadavers be donated voluntarily, explicitly, on personal behalf, based on altruistic reason, by the person him/herself. However as the demand is increasing, the present legislation allows the consent obtained from the family or even the use of unclaimed cadavers for teaching purposes, but these procurement modalities are far from being ethically perfect. The dissection of the body must be carried out in a respectful manner towards the deceased person up to the very end, when the remains of the cadaver (after the educational activities) benefit from appropriate funeral services.

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.

ACKNOWLEDGEMENT

The authors wish to convey his sincere thanks to our Dean Dr. Geeta Niyogi Madam for her valuable help, support and inspiration. We are also thankful to Mr. M. Murugan. Authors also acknowledge the immense help received from the scholars whose articles are cited and included in references of this manuscript. The authors are also grateful to authors / editors / publishers of all those articles, journals and books from where the literature for this article has been reviewed and discussed.

REFERENCES

1. Jones D.G., The Human Cadaver: An Assessment Of The Value We Place On The Dead Body, Perspectives On Science And Christian Faith, No. 47, March 1995; 43-51.
2. Mimms, C., Death Encyclopedia, Editura Orizonturi, București: 2006; 241-265.
3. Older J., Anatomy: A Must For Teaching The Next Generation, Surgeon, Apr, 2004; 2(2): 79-90.
4. Varghese S.P., Cadavers For Anatomical Dissection, Indian Journal Of Medical Ethics, Jan-Mar 2005; 13(1).

5. ADAM: Animated Dissection Of Anatomy For Medicine, Bull Med Libr Assoc, No. 1, January 1993; 81: 88-89.
6. Autopsy, [Http://En.Wikipedia.Org/Wiki/Autopsy](http://en.wikipedia.org/wiki/Autopsy), Retrieved 12.04.2008;
7. Codul De Deontologie Medicală A Colegiului Medicilor Din România, M. Of., No. 418/18.05.2005
8. Dissection, [Http://Www.Answers.Com/Topic/Dissection?Cat=Technology](http://www.answers.com/topic/dissection?cat=technology), Retrieved 12.04.2008
9. Hotărârea Guvernului României Nr. 774/7.09.2000 Pentru Aprobarea Regulamentului De Aplicare A Dispozițiilor O.G. Nr. 1/2000.
10. Legea Nr. 459/18.01.2001 Pentru Aprobarea OG Nr. 1/2000 Privind Organizarea Activității Și Funcționarea Instituțiilor De Medicină Legală, M. Of., No. 418/27.07.2001.
11. Legea Drepturilor Pacientului Nr. 46/21.01.2003, M. Of., No. 51/29.01.2003.
12. Legea Nr. 104/27.03.2003 Privind Manipularea Cadavrelor Umane Și Prelevarea Organelor Și Țesuturilor De La Cadavre În Vederea Transplantului, M. Of., No. 222/03.04.2003.
13. Legea Nr. 95/14.04.2006 Privind Reforma În Domeniul Sănătății, M. Of., No. 391/05.05.2006.
14. Ordinul Comun Al Ministerului Justiției Nr. 1134/C/25.05.2000 Și Al Ministerului Sănătății Nr. 255/4.04.2000 Pentru Aprobarea Normelor Procedurale Privind Efectuarea Expertizelor, A Constatărilor Și A Altor Lucrări Medico-Legale;
15. The Visible Human Project, [Http://Nml.Nih.Gov/Research/Visible/Visible_Human.Html](http://nml.nih.gov/research/visible/visible_human.html), Retrieved 12.04.2008.