

Review Research Paper

Pathological Autopsy: Most Valuable Aid in the Present Medical and Medico-Legal Scenario

*Jayashree. G. Pawar, ** Gurudatta. S. Pawar

Abstract

It is a fact that the advancements in medicine would not have been possible without the help of autopsies, may be pathological or clinical or medico-legal. Mankind has been immensely benefited by the autopsies all these years. With the changing disease patterns, re emerging diseases, environment and social system, autopsies have become more necessary and relevant than before. The objectives of an autopsy examination are not being achieved at the highest level due to under trained medical officers who handle more than 80% of autopsy work in India and also due to the unwillingness or inertia of pathologists or clinicians to perform the autopsies. Here the in this article we try to highlight the contributions of pathological autopsies to the medical sciences & our social system. We also discuss why there is urgent need for more and well organized clinical or pathological autopsies through out the nation.

Key Words: Pathological autopsy, Medico-legal autopsy, Cause of death, Diagnostic errors, Research

Introduction:

“A surgical operation is attended with pain and is for the benefit of the Individual, an autopsy is free from pain is for the benefit of humanity”. **Paul. H. Brussaral**

It is a well known fact that the advancement of medical science would not have been possible without the help and useful contributions from the autopsies, especially the pathological/clinical autopsies. Mankind has been immensely benefited by the autopsies all these years. Even after knowing this fact, the pathological autopsies are not getting their due place in the medical field or in our society. With the changing disease patterns, reemerging diseases, epidemics of new diseases, persons without proper medical cause of death and with the changing social system, autopsies have become more necessary and relevant.

In a study of 53 autopsy series identified, 42 reported major errors and 37 reported class I errors. Twenty-six autopsy series reported both major and class I error rates in clinical diagnosis.

Corresponding Author:

*Associate Professor/Reader, Dept. of Pathology
J J M Medical College, Davangere, Karnataka, India
E- Mail: dr_gurudatta_pawar@yahoo.com

** Professor & Head,
Department of Forensic Medicine & Toxicology,
Chennai Medical College & Research Centre
Irungalur, Trichy, Tamilnadu, India

The possibility that a given autopsy will reveal important unsuspected diagnoses has

decreased over time, but remains sufficiently high that encouraging ongoing use of the autopsy appears warranted. [1] This article is an attempt to remind the medical fraternity and society regarding the importance and contribution of clinical autopsies and to stress over the need for conducting more clinical autopsies than ever.

Decline in the Rate of Pathological Autopsies:

An autopsy is a comprehensive study of dead body, performed by a trained physician, employing a recognized dissection procedure and technique. Autopsy is derived from the Greek word **Autopsia** means seeing with one's own eyes. [2] There is a gradual and steady decline in the clinical autopsies worldwide including the developed countries, which in fact made steady progress in the medical research by them. The pathological or clinical autopsy performed by the pathologist or clinician helps the pathologist to know the pathology of organs due to diseases and it has academic and research value. [3]

There are many reasons for the decline in the number of autopsies. One of the reasons may be that, it may induce extra stress on the already distressed family who has lost their loved one. They prefer to take the body and complete the last rituals rather than getting the autopsy done on it. One of the proposed reasons for the death of the autopsy described by O'Grady is an increased confidence in new diagnostic tools, particularly modern imaging techniques. Surprisingly, the rate of misdiagnosis

detected at autopsy (about 40%) did not improve from 1960-70, before the advent of computed tomography, ultrasound, nuclear scanning, etc, to 1980 and after. [4]

There is also gross lack of information in both public and medical professionals regarding the clinical autopsies, especially the methods and the advantages. There are misconceptions regarding autopsy, such as the fear of disfigurement of their loved ones as well as there is lack of interest from the medical community to convince, pursue the relatives or to educate the common man regarding the medical and social aspects of clinical / pathological autopsies.

Why we need them more than ever:

The pathological autopsy is performed with the consent of the relatives of the deceased to arrive at the diagnosis of cause of death where diagnosis could not be reached during the treatment or to confirm diagnosis where it was doubtful. [5]

Over estimation of Cause of Death:

Globally majority of sudden unexpected deaths are attributed to cardiac cause. This happens not just in rural areas but also in corporate hospitals. This kind of certifications will lead to over inflated figures in national health statistics leading to formulation of wrong, unwanted health policies. Diseases of pancreas and gall bladder pose more problems for diagnosis and are less mentioned in the death certificates. In such situations the clinical autopsy can help to conclude the exact cause of death if performed. In a study where 406 consecutive autopsy cases during 2 years were studied and they observed that with each age increase of 10 years added 16.2% to the risk of the diagnostic comparison to be categorized in classes I and II (major discrepancy) in comparison to classes III, IV and V. Age and hospital ward influenced the distribution of diagnostic discrepancy or concordance between clinical and autopsy diagnosis. [6]

Clinical Data:

Even with the progress and sophistication in investigations and invasive procedures, the difference between clinical diagnosis and autopsy diagnosis is 10%. This is really a matter of concern to all the medical professionals and to the society too. Potential medical adverse events are not uncommon in decedents undergoing forensic autopsy. They are particularly associated with potential diagnostic errors. Forensic autopsy may provide information that could be used to improve care and reduce deaths due to potential medical adverse events. [7]

Taking these in to consideration, a clinical autopsy will definitely gives an edge in early detection, management and survival period or cure of the patient by unfolding the pathology of that condition in a systematic way.

Satisfaction to the Next Concerned:

In a study carried out on the relatives of the deceased on whom clinical autopsy was conducted, 80% of them said that they were benefited by the pathological autopsy. Before they felt deficiencies in the treating doctors but changed their opinion, that they are happy to learn that due care has been taken while treating the deceased. They were also happy for knowing the correct cause of death which was ambiguous before. Many felt that they have contributed for the advancement of medical sciences. The autopsy relieved distressed parents of the children who felt the guilt and responsibility for the death of the child.

Advantages to the Deceased Family:

There are considerable benefits in clinical research and the understanding of the diseases if relatives are prepared to give consent to the carrying out of post mortems to foster this knowledge. However it is essential that the request is handled sensitively and the all relevant information is given to the relatives about the post mortem and about the possibility of any tissue being removed, retained and stored. It is essential that the general public is reassured that the correct procedures are in place, and implemented and regularly monitored. [8]

Clinical autopsies have identified some of the congenital anomalies which were overlooked or not diagnosed when the person was alive. These findings will help in genetic counselling of the families to identify the problem and to take proper precautions in future. They also help in removing the guilt from the minds of the relatives that they could not do much or afford good treatment if the autopsy finds lesion which is incompatible with life. They well feel relieved especially the parents of the child. This data will benefit them to claim insurance amount which might have been rejected on some grounds like self destruction or self induced etc.

General Benefits:

Medical education is the top most beneficiary of these autopsies. Lots of teaching materials like specimens, slides are procured during autopsies. It will also help to improve the knowledge of all concerned. The samples, obtained being used in a wide range of research, education and training of medical and allied students. [9] Health care organizations

and health care providers can assess the quality of the care & treatment provided by them or their team. They can correlate their diagnosis with autopsy diagnosis and improve if necessary. Autopsy reveals or confirms cause of death in nearly three quarters of cardiac surgical deaths and provides information that differs significantly from pre-mortem clinical impression more than 20% of the time. As such, the autopsy remains important to quality assurance in cardiac surgical care. [10] Unknown public health hazards can be identified and notified for the benefit of the society. Above all a correct data is very much essential for national health statistics which in turn prove of immense value when forming the national health polices.

What is the need of the hour now?

There are no standard procedures or guidelines to conduct autopsies. [11] A national protocol of standard autopsy procedures and documentation is the need of the hour. In most of the new medical colleges of India, there is no autopsy work for the Pathologist or to the Forensic medicine faculty. Teaching faculty must stop under valuing the autopsies and their role in day to day medical practice. They must appreciate the autopsies and conduct autopsies for their own benefit and to the community which they are serving. They must encourage the involvement of post graduates to perform autopsies under strict supervision. The high discrepancy rates documented at the UHWI are similar to those reported globally. This study supports previous attestations that the necropsy remains a vital tool for determining diagnostic accuracy, despite modern modalities of clinical investigation and diagnosis. [12]

Whenever they are performing the clinical autopsies, they must allow the presence of interdisciplinary faculty involved in respective cases. They must fix an early and appropriate time suitable for both Pathologist and the Clinician, so as to have a good & productive interaction during and after autopsy to form a scientific conclusion. The pathologist is able to exclude the possibility of internal injury and document the presence and extent of natural disease. [13] Video, slides, photographs, specimens & samples to be collected with the consent of the next kin of the deceased for permanent records. There is an urgent need to develop a national protocol and man power facilities for clinical autopsies in every major hospitals of the country.

Above all public education regarding the clinical autopsies can't be overemphasized. A

well educated/informed person will definitely encourage, support and co-operate for the procedure, which is hindered by many misconceptions. This can be done by Government agencies and NGO's.

Conclusion:

It is high time that we must realize the importance of clinical autopsies. Despite decline, the pathological autopsies find a prominent position in the medical literature, more so in the fields of Neurosciences, CVS oncology, Haematology, & Respiratory fields. Government must liberalize the rules pertaining to the permission of conducting Medico-legal autopsies and encourage all qualified persons to perform clinical autopsies for quality results & reports.

Public education and propaganda targeted at the benefits clinical autopsies for the persons in particular and to the society in general. The society always accepts and welcomes things which are beneficial to it. It is essential that we must highlight these benefits in all possible means. Making autopsy compulsory on all the uncertified deaths can also be done by legislation. Usefulness of clinical autopsies to the mankind is unquestionable, so let us all do our best to encourage it

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