

## Original Article

## Critical Appraisal of Unknown Autopsies; A Retrospective Study at Forensic Medicine and Toxicology Department, KEMU, Lahore

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### Abstract

**Objective:** to determine the demography of critical unknown autopsies among unknown bodies received at department of forensic medicine and toxicology, KEMU Lahore.

**Methods:** This retrospective study took place at Forensic medicine and Toxicology department, KEMU, during January 2019 to December 2019. All the unknown autopsy cases of both genders brought during this period were included in the study excluding the known ones.

**Results:** The peak age of the deceased came out to be between 30 to 45 years with a conspicuous preponderance of males being observed in these cases (86.3%). Conduction of autopsy for majority of the cases was completed within 10 days of the reception of the unknown bodies. Natural death (76%) due to long standing systemic disease remained the major cause of death, while among the unnatural causes, head trauma stood on the top (7.5%). Financial cost calculated came out to be 5000 PKR per case. Majority of this population comprises of street dwellers and drug addicts coming from different areas.

**Conclusion:** Demographic characteristics like expected age, gender and cause of death could be ruled out. Addicts and street dwellers remained the top concern amongst unknown autopsies.

**Keywords:** Autopsy, postmortem, Toxicology.

### How to cite this:

Janjua MS, Fatima AU, Munawwar A, Malik AR. Critical appraisal of unknown Autopsies; a retrospective study at Forensic Medicine and Toxicology Department, KEMU, Lahore. J Pak Soc Intern Med. 2022;3(2): 121-123

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DOI: <https://doi.org/10.70302/jpsim.v3i2.2223>

### Introduction

Medicolegal autopsy means a post mortem examination of the body of a person after dissection including the three body cavities after opening them as well as collection of evidence for toxicological and histological analysis to determine the cause of death.<sup>1</sup>

Medicolegal autopsy is considered a gold standard in determining cause, manner and mode of death. As per state law Pakistan Penal Code 174, medicolegal or forensic autopsy is conducted to elicit cause of death in all cases of unnatural deaths.<sup>2</sup> It is a mandatory procedure in all cases of suspicious and criminal deaths.<sup>3</sup> Lahore is the 2<sup>nd</sup> largest city of Pakistan. Every year hundreds of cases are brought for Post-mortem examination at department of Forensic Medicine & Toxicology, KEMU Lahore.<sup>4,5</sup> Most of these cases are unknown. A major share of routine burden of unknown autopsies is carried by drug addicts and street dwellers and espe-

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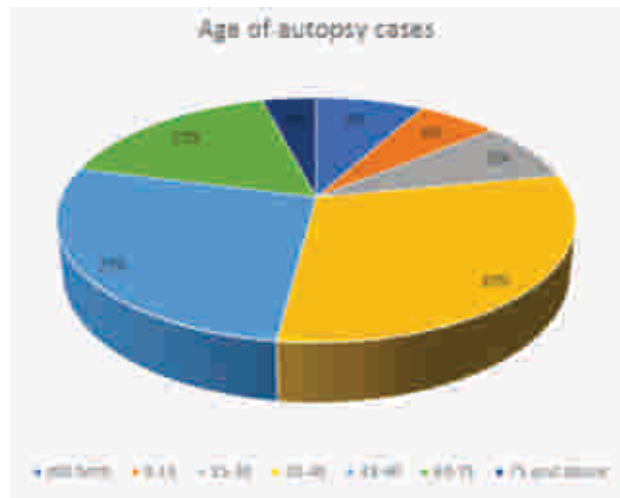
cially a mass burden is placed on the state as well as on the department in cases of disasters like bomb blasts which is very cumbersome.<sup>6</sup>

### Methods

The present study is a one-year retrospective study that took place from January 2019 to December 2019 at Forensic Medicine and Toxicology Department KEMU, Mayo Hospital Lahore, Pakistan. Medicolegal autopsy is done in every case of suspicious or unnatural death and all the unknown cases as well. Simple random sampling was done from the unknown cases brought for Autopsy at Forensic Medicine and Toxicology Department during the said period. The required data was collected from autopsy reports, inquest reports and hospital notes. The data so collected was statistically analyzed, tabulated and presented in the study in the form of graphs and tables.

**Results**

A total of 721 autopsies were conducted by Forensic Medicine and Toxicology Department KEMU in 2019, out of which 351 (48.6%) were of the unknown cases when received at the department. The peak age group of the unknown cases was found to be 30-45 years with a percentage of 30% and the second highest peak (27%) was obtained at 45-60 years. As concerns the gender distribution, majority of these cases were male (86.3%). In contrast only (13.7%) were females.



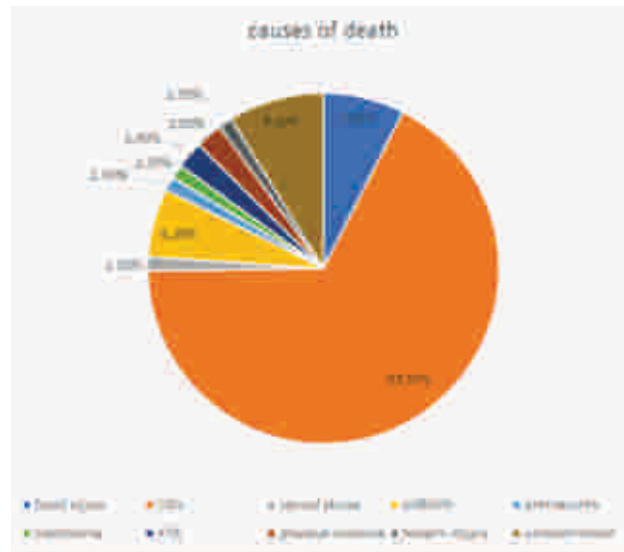
**Figure 1:** Age Group of the Deceased

In these reported cases, 65.5 % cases were brought to the department post meridian. The average time elapsed between the arrival of the bodies and their autopsy conduction was 1-10 days for 43.8 % of the cases. While some cases (6.25%) had a delay of 30days or more.

**Table 1:** Time Elapsed Between Arrival of Dead Body and Autopsy Conduction

No of days	Frequency	Percentage
0-10	153	43.75
10-20	127	36.25
20-30	48	13.75
30 above	22	6.25
<b>Total</b>	<b>350</b>	<b>100</b>

Among the unidentified autopsy cases, the cause of death in 76.3% of the subjects was natural; due to some pathological condition or aging, the most prominent disease being pulmonary disease and its complications (67.5%) followed by head trauma (7.5%). In addition to this, 6.3% cases were reported of stillborn babies. RTA, physical violence, sexual abuse, firearm injury and drowning were elicited as cause of death in rest of the cases.



**Figure 2:** Causes of Death of Deceased

The estimated cost of autopsy conduction amounts to Rs 5000 (PKR) per case. Thus, a significant financial burden is placed on the country's economy due to the unknown cases of autopsy. Moreover, mortuary expenses are also significant since the storage of bodies is mandatory till the preparation of autopsy documents by the Police and autopsy conduction.

**Discussion**

In the light of present study, it is revealed that approximately 48% of total autopsy burden at Forensic department KEMU comprises of the unknown cases with an overwhelming majority of males. This massive load can be attributed to the large population of the Lahore city especially the walled city surrounding the premises of KEMU and Mayo Hospital. A fairly large number of migrants and visitors from other cities to Lahore also contribute to this grave issue. In addition to this, numerous drug addicts and beggars form a major part of the unknown cases of autopsy which is a common enough scene on the streets of Lahore.<sup>7</sup> This study showed that the peak age group of the unknown cases was 30-45 years which indicates that the main victims of such deaths are Middle aged people, pointing to the dire need of Rehabilitation centers and shelter homes for drug addicts and homeless people respectively, proportionate to the city's population.<sup>8,9</sup> The major cause of death was found to be CIDL.

According to the study on unidentified bodies conducted in Calcutta, India the majority of unidentified cases of autopsy fell in the age range of 31-45 years and the percentage of males was reported to be 87%. The major cause of death in those cases was elicited to be natural followed by drowning in the River Ganges.<sup>10</sup> In contrast, the present study reflects that the second most common

cause of death in unknown cases is Head injury thus we certainly need to revise our roadside safety strategies and check traffic mismanagements.

### Conclusion

Death and related matters always demand a high degree of carefulness during investigation and of course if the unknown body is recovered from a certain place, it becomes a serious and sensitive issue. As the facts and figures presented in the study indicate that the workload of Unknown cases of autopsy is quite cumbersome and is a big financial drain as well. It is the dire need of the time to adopt some solid measures like introduction of rehabilitation centers, shelter homes and improvement of traffic control and management for reduction in the unknown cases of autopsy. Secondly an efficient inter-city coordination system between Police centers should be established for early identification of the unknown deceased individuals. This is not only necessary to relieve the burden of Forensic departments but also to ensure provision of Human rights to the socially abandoned individuals who die on the footpaths. Furthermore, the addressing of this issue of unknown bodies will contribute in reducing crime index especially in densely populated cities like Lahore.

**Ethical Approval:** Necessary ethical approval was taken from the Institute review board.

**Acknowledgement:** The authors express their sincere thanks to Dr. Kanwal Fatima for her assistance in the study and the critical review of the study.

**Conflict of Interest:** None

**Funding Source:** None

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