Utility of inquest and medico-legal autopsy in community deaths at tertiary care hospital of India

Pragnesh B. Parmar1, Gunvanti B. Rathod2, Prerna Bansal3, Yadukul S1, Anupam Kumar Bansal4

1Departments of Forensic Medicine and Toxicology and 2Pathology and Lab Medicine, All India Institute of Medical Sciences, Bibinagar, Hyderabad, Telangana, 3Departments of Biochemistry and 4Forensic Medicine and Toxicology, RVRS Medical College, Bhilwara, Rajasthan, India

ABSTRACT

Background: In India, inquest is carried out by police or magistrate depending upon the type of death and medico-legal autopsy is carried out by doctor. In some cases, inquest is sufficient to make out necessary information related to death and medico-legal autopsy can be avoided in such death, but medico-legal autopsy has its own value. Materials and Methods: A retrospective record-based study was carried out at RVRS Medical College, Bhilwara, Rajasthan, regarding the correlation of inquest and medico-legal autopsy findings in community deaths which were brought dead to hospital in the year 2020. Results: A total of 467 cases of community deaths were brought dead for medico-legal autopsy in the year 2020. As per inquest, 7.28% died due to hanging, 3.85% died due to burns, 3.43% died due to electrocution, 16.27% died due to poisoning, and the same was established via medico-legal autopsy without any difference from inquest report. After inquest, in 3% of cases, the cause of death remained undetermined, while after the medico-legal autopsy, it was only 0.86%. The manner of death was undetermined in 3% of cases after inquest, while after the medico-legal autopsy, only in 0.86% of cases. Conclusion: We recommend proper training of the investigating officers who conduct inquest to overcome the discrepancies observed between the investigating officer and the doctor in ascertaining the cause of death and manner of death in all unnatural deaths in India. If well-trained person will conduct in depth inquest, then medico-legal autopsies can be avoided in certain types of death.

Keywords: Brought dead, community death, inquest, medico-legal autopsy

Introduction

In India, as per the law of the land, all unnatural community deaths and brought dead (dead on arrival to hospital) cases should be informed to the police. Depending on the circumstances of that particular death, the investigating officer will decide whether an medico-legal autopsy is required in that case and subsequently decides who will do the inquest as per sections 174 CrPC (Criminal Procedure Code) and 176 CrPC. The preparation of an inquest report under the Code of Criminal Procedure, 1973 is conducted to create a record of crime as it forms an essential basis for determining the commission of an offence. The process of criminal investigation is a search for truth. Under Article 21 of the Constitution of India (1950), the right to know or the right to have correct knowledge has been included. This includes in its ambit the right to know the actual cause of the death of any person. Primary or first contact physicians working in government set up like health care centers in India have to deal with various kinds of medico-legal autopsies and inquest. Along with primary care, dealing with medico-legal issues is essential for physicians. Even in vaccine-related deaths and maternal mortality deaths, verbal autopsies[1] along with medico-legal/pathological autopsies are warranted to reach cause of death. The
aim this study is to understand utility of inquest and medico-legal autopsies in community deaths in Indian scenario.

Materials and Methods

A retrospective record-based study was carried out at RVRS Medical College, Bhilwara, Rajasthan, regarding the correlation of inquest and medico-legal autopsy findings in community deaths which were brought dead to hospital in the year 2020. RVRS Medical College is affiliated to Rajasthan University of Health Sciences and permitted by Medical Council of India. An inquest is carried out by a police constable who is not medically qualified in an Indian scenario. A forensic expert carried out the medico-legal autopsy in all cases in this study with a post-graduate degree in Forensic Medicine subject. All the community deaths which were brought dead to hospital in 2020 were studied as per inquest report and medico-legal autopsy report. During coronavirus disease (COVID) time, all medico-legal autopsies were carried out by taking complete precautions like wearing a complete Personal Protective Equipment (PPE) kit. Case to case basis decision was taken for doing a thorough, meticulous autopsy or minimally invasive autopsy. Cause of death, manner of death, and identification of unknown deceased were compared in both inquest and medico-legal autopsy report to assess the utility of both.

Results

A total of 467 cases of community deaths were brought dead for medico-legal autopsy in the year 2020; 24.84% of cases belonged to the age group of 21 to 30 years, 22.48% belonged to the age group of 31 to 40 years, while only 2.15% belonged to the age group of less than 10 years [Table 1].

Out of 467 cases, 78.59% were male, 21.20% were female, while only one was transgender [Table 2].

| Table 1: Age distribution of brought dead cases in 2020 |
|-------------------------------------------------------|
| Age group (in years) | No. of cases | Percentage |
| ≤10 years          | 10           | 2.15        |
| 11-20              | 69           | 14.77       |
| 21-30              | 116          | 24.84       |
| 31-40              | 105          | 22.48       |
| 41-50              | 78           | 16.70       |
| 51-60              | 60           | 12.85       |
| >60                | 29           | 6.21        |
| Total              | 467          | 100         |

| Table 2: Gender distribution of brought dead cases in 2020 |
|----------------------------------------------------------|
| Sex            | No. of cases | Percentage |
| Male           | 367          | 78.59      |
| Female         | 99           | 21.20      |
| Transgender    | 1            | 0.21       |
| Total          | 467          | 100        |

As per inquest, 7.28% died due to burns, 3.43% died due to poisoning, the same was established via medico-legal autopsy without any difference; 4.07% died due to drowning as per inquest, but on medico-legal autopsy, 3.85% died due to drowning. Mechanical injuries were noted in 39.40% of cases in inquest, while during the medico-legal autopsy, it was actually in 39.61%. Cardiac cause of death was established in 6% of cases as per inquest, while during the medico-legal autopsy, it was in 6.64% of cases. As per inquest, 11.13% had other natural cause of sudden death, while it turned out to be 11.99% in the autopsy. Snakebite as the cause of death was noticed in 5.57% of cases in inquest, while after the autopsy, it was in 6.21% of cases. After inquest, in 3% of cases, the cause of death remained undetermined, while after the medico-legal autopsy, it was only 0.86% [Table 3].

As per inquest, 3.85% of cases were homicidal, but it turned out to be 4.93% after the medico-legal autopsy. Suicide was suspected in 24.20% of cases as per inquest, but medico-legal autopsy suggested 23.76% of cases. Accidental manner as considered in 50.54% of cases as per inquest, while after the medico-legal autopsy, it was turned out to be 51.61%. Inquest suggested 18.41% cases of natural manner and medico-legal autopsy said it was 18.84%. The manner was undetermined in 3% of cases after inquest, while after the medico-legal autopsy, only in 0.86% of cases [Table 4].

A total of 95.29% of cases were identified deceased, and the rest 4.71% was unidentified as per inquest and medico-legal autopsy [Table 5].

Discussion

An inquest is an inquiry or investigation into the cause of death. It is conducted in suicide, murder, killing by an animal or machinery, accidents, deaths due to torture or ill-treatment, occupational diseases, suspected medical negligence, suspicious (unnatural) deaths, deaths due to anesthesia or operation, and unidentified or skeletonized bodies.[3] In India, two types of inquest are followed, namely Police inquest (174 CrPC) and Magistrate Inquest (176 CrPC).

1. Police Inquest:
   The officer in charge (usually sub-inspector but not below the rank of Head Constable) of a police station conducts the inquest.

2. Magistrate Inquest:
   This is conducted by a District Magistrate (Collector/Deputy Commissioner), Sub-divisional Magistrate, Tahsildar, or any other Executive Magistrate, especially empowered by the State Government.

Problem statement and scope of inquest report

The scope of an inquest report has been discussed in several case laws. In Pedda Narayana Vs State of Andhra Pradesh (1975), the Supreme Court held that the scope of an inquiry under Section

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174 of the CrPC is limited in nature. It is only to ascertain whether a person has died under suspicious circumstances or unnatural death and the apparent cause of death. This above principle was reiterated in Amar Singh Vs Balwinder Singh (2003), wherein the Court observed that the section does not contemplate how the incident took place or the names of the accused should be mentioned in the inquest report. In Madhu alias Madhuranatha Vs State of Karnataka (2014), a two-judge bench of the Apex Court has observed that an inquest report is not substantive evidence. The Supreme Court held in Yogesh Singh Vs Mahabeer Singh (2017) that the inquest report can only be looked into for testing the integrity of the witnesses of the inquest.

The World Health Organization (WHO) on March 11, 2020, has declared the novel COVID-19 outbreak a global pandemic. Ever since this was declared, the investigation officers were hesitant to get the medico-legal autopsy on many cases because of the fear factor. This resulted in discrepancies in cause of death and manner of death in many cases across the country. This study was done to assess the utility of inquest and medico-legal autopsy in community deaths which were brought dead to hospital.

In our study, as per the inquest, 7.28% died due to hanging, 3.85% died due to burns, 3.43% died due to electrocution, 16.27% died due to poisoning, and same was established via medico-legal autopsy without any difference which indicated that in such type of community deaths which were brought dead, there is not much difference in the cause of death even after medico-legal autopsy. In such cases, medico-legal autopsies are helpful to collect evidence, scientific confirmation of the cause of death, more details regarding documentation of injuries, type of poison, etc., If in depth inquest will be done by well-trained persons like doctors then medico-legal autopsies may not be required in such deaths.

The inquest failed to identify 3 cases of snakebite which was confirmed during the medico-legal autopsy, which shows the difference in examination by police and forensic expert. One case of mechanical injury, 3 cases of cardiac cause, and 4 cases of other natural cause of death were determined after a complete

### Table 3: Cause of death as per inquest and after post mortem examination

| Probable cause of death as per inquest | No. of cases | Percentage | Cause of death after post mortem | No. of cases | Percentage |
|---------------------------------------|--------------|------------|----------------------------------|--------------|------------|
| Hanging                               | 34           | 7.28       | Hanging                          | 34           | 7.28       |
| Drowning                              | 19           | 4.07       | Drowning                         | 18           | 3.85       |
| Burns                                 | 18           | 3.85       | Burns                            | 18           | 3.85       |
| Electrocution                         | 16           | 3.43       | Electrocution                    | 16           | 3.43       |
| Mechanical injuries                   |              |            |                                  |              |            |
| Head and Neck                         | 184          | 39.40      | Head and Neck                    | 185          | 39.61      |
| Abdomen                               |              |            | Abdomen                          |              |            |
| Other parts                           |              |            | Other parts                      |              |            |
| Anaesthetic or operative death        | 00           | 00         | Anaesthetic or operative death   | 00           | 00         |
| Cardiac cause                         | 28           | 6.00       | Cardiac cause                    | 31           | 6.44       |
| Other natural cause                   | 52           | 11.13      | Other natural cause              | 56           | 11.99      |
| Poisoning                             | 76           | 16.27      | Poisoning                        | 76           | 16.27      |
| Snakebite                             | 26           | 5.37       | Snakebite                        | 29           | 6.21       |
| Undetermined                          | 14           | 3.00       | Undetermined                     | 04           | 0.86       |
| Total                                 | 467          | 100        | Total                            | 467          | 100        |

### Table 4: Manner of death as per inquest and after post mortem examination

| Probable manner as per inquest | No. of cases | Percentage | Manner after post mortem | No. of cases | Percentage |
|--------------------------------|--------------|------------|--------------------------|--------------|------------|
| Homicide                       | 18           | 3.85       | Homicide                 | 23           | 4.93       |
| Suicide                        | 113          | 24.20      | Suicide                  | 111          | 23.76      |
| Accident                       | 236          | 50.54      | Accident                 | 241          | 51.61      |
| Natural                        | 86           | 18.41      | Natural                  | 88           | 18.84      |
| Undetermined                   | 14           | 3.00       | Undetermined             | 04           | 0.86       |
| Total                          | 467          | 100        | Total                    | 467          | 100        |

### Table 5: Identification of dead as per inquest and after post mortem examination

| Probable identification as Per Inquest | No. of cases | Percentage | Identification after post mortem | No. of cases | Percentage |
|----------------------------------------|--------------|------------|----------------------------------|--------------|------------|
| Identified                              | 445          | 95.29      | Identified                        | 445          | 95.29      |
| Unknown                                | 22           | 4.71       | Unknown                          | 22           | 4.71       |
| Total                                  | 467          | 100        | Total                            | 467          | 100        |
medico-legal autopsy which was missed during inquest. This has been supported by a study done by Suzuki et al.,[8] who in their study noted that the number of ambiguous causes of death, such as unspecific heart failure and arrhythmia, certified without autopsies was much higher in medical practitioners’ cases than in official medical examiners’ cases.

In 14 cases, the manner of death remained undetermined, but after the medico-legal autopsy, only 4 cases remain undetermined, which indicated how vital medico-legal autopsy is. This is supported by the study done by Brinkmann et al.,[9] who in their study observed that a total of 92 “discoveries by chance” were reported where a natural death was given on the death certificate after the external examination of the corpse among them 49 accidents, 10 homicides, and 19 deaths by medical implications.

There is not much help in identifying the body even after the medico-legal autopsy. Still, autopsy helps to collect various evidence for DNA and fingerprints, which in turn further helps in identification. For identification, a medico-legal autopsy is very useful, and its role cannot be ignored.

To sum up, this is still a grey area of research in India, as not much has been explored in this aspect. Many such studies across the country by researchers will give an exact amount of discrepancies noted after conducting a medico-legal autopsy. Medico-legal investigation of death is still not full proof in India as inquest is carried out by police personnel who is not experienced in medicine and in many centers, medico-legal autopsy is carried out by medical graduates who are not expert enough in forensic.

Suggestions
To strengthen the system of medico-legal investigation of death, inquest should be carried out by well-trained forensic personnel instead of police constable, and if more investigation is further warranted, then medico-legal autopsy must be done by forensic experts with post graduate degree in Forensic Medicine instead of just graduate MBBS doctor. If medico-legal autopsies will be done by forensic experts, only then treating physicians can focus more on treatment aspects instead of spending time in court proceedings which in turn strengthen primary health care in India. Health care institutions and doctors must create awareness among police and general populations regarding medico-legal autopsies to build confidence among community.[10]

Conclusion
To conclude, we recommend proper training of the investigating officers who conduct inquest to overcome the discrepancies observed between the investigating officer and the doctor in ascertaining the cause of death and manner of death in all unnatural community deaths in India. Regular national level registry should be maintained regarding correlation of inquest and autopsy findings.

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Conflicts of interest
There are no conflicts of interest.

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