

Original research article

**HISTOPATHOLOGICAL FINDINGS IN VARIOUS ORGANS IN
CUSTODIAL DEATHS OF PRISONERS: A THREE YEAR
RETROSPECTIVE STUDY**

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ABSTRACT:

BACKGROUND: Custodial deaths either due to natural or unnatural cause always raise suspicion of violation of human rights. If such death is due to natural cause then various issues such as negligence in providing medical aid or improper health care facilities are often raised.

AIM: To study the various histopathological findings in organs in custodial deaths of prisoners and find out the commonest cause of death in prison inmates.

METHODS: A two year retrospective study was carried on 32 medicolegal cases received in our Pathology department within the time span of January 2020 till January 2023. After routine processing, H & E stained slides were examined. Special stains were used wherever necessary.

RESULT: In our study all cases were male. Most commonly involved organ was heart followed by lungs. All had natural cause of death amongst which Acute myocardial infarction was the commonest followed by Pulmonary Tuberculosis. One case of malignancy was also reported.

CONCLUSION: Our study had very few cases, so results may not be conclusive. Since majority of the custodial deaths were due to natural causes, improper medical facilities could be an aggravating factor. Providing health care facilities equivalent to that available in community is the most important remedial measure.

Key words: Custody, Autopsy, Histopathology.

INTRODUCTION

The word “custody” implies guardianship and protective care.^{1,2} The word “autopsy” is derived from the Greek word “autopsia” meaning “to see for one self”.^{3,4}

Deaths either natural or unnatural in custody often raise the suspicion of violation of human rights.⁵ Not that always such deaths are due to unnatural or violent causes, indeed most of the time they are due to natural causes only.^{6,7}

As per National Human Rights Commission (NHRC) of India, all deaths under custody must be investigated by a magistrate and the entire process of

autopsy should be video graphed followed by submission of reports within 24 hrs. of autopsy.⁸

Preventing torture in custody and ensuring strict compliance of its guidelines in custodial deaths is of the important agendas on NHRC's list.^{9,10}

A person is said to be in Custody from the moment he or she is apprehended, arrested, imprisoned, detained, not permitted to leave at will or otherwise deprived of his liberty by agents of state or by any other public or private organization including correctional and Medical institutions operating within the jurisdiction of that state.^{2,3}

Death in custody is defined as death occurring in some form of custodial detention such as police cell or prison.¹¹ Medicolegal autopsies are performed by the forensic expert along with the pathologist to determine the cause of death.⁶ Not all medicolegal autopsies are subjected to histopathological analysis. Only in those where the cause of death was not readily apparent on gross are sent for histopathological study. But as per norms all custodial death cases are subjected to histopathological examination. Many of these deaths are premature deaths and can be prevented with proper care and treatment.^{8,12} In addition, having knowledge and data regarding such deaths is important to focus attention on prison medical services and can facilitate implementation of preventative programmes.⁸

This study emphasizes the need for histopathological study of autopsy cases in custodial deaths which otherwise were clinically undiagnosed, thus the need for providing health care facility equivalent to that available in community for prisoners.²

MATERIALS AND METHODS

The present study is a retrospective study conducted in the department of pathology, Government Medical College, Chhatrapati Sambhajinagar. During the period of three years histopathological examination was carried on 32 medicolegal autopsy cases of custodial deaths. Relevant information was gathered from post-mortem reports and medical record files.

A thorough gross examination of all specimens, including measurements, consistency, cut surface, details of any lesions if present were recorded. Samples were taken from representative sections and processed for routine histopathological study. H & E staining was done. Special stains were used wherever necessary.

RESULTS

In our study all the prisoners were males. Majority belonged to the age group of 41 to 50 years. Most commonly involved organ was the heart followed by the lung.

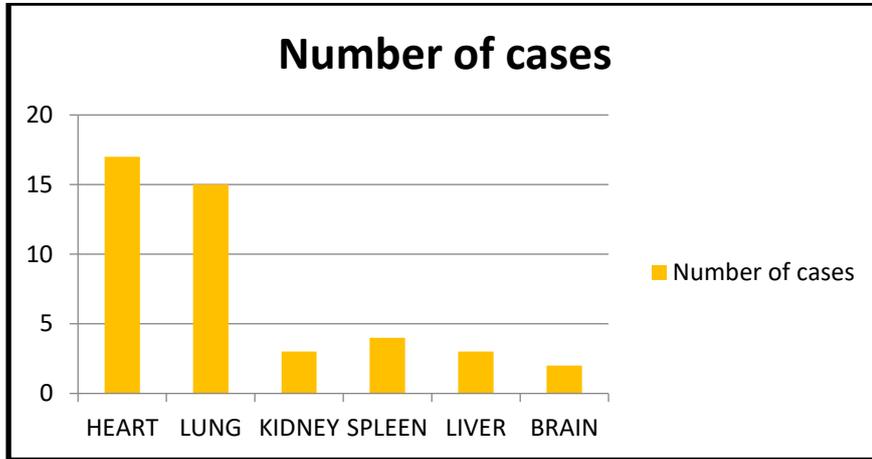


Fig 1. Organ wise distribution of autopsy cases

Acute myocardial infarction was the most common pathology in the heart.

Pulmonary tuberculosis was the commonest pathology in the lung.

Other organs involved were Liver, Spleen and Brain.

Table 1. Lesions in Heart

Pathology in heart	Total
Myocardial infarction	9
Atherosclerosis	16
Vessel obliteration	13

Table 2. Pathologies in the lung.

Pathology in lung	Total
Pulmonary tuberculosis	6
Pulmonary edema	6
Chronic venous congestion	5
Pneumonia	5
Bronchiectasis	1

Kidney on microscopy showed changes of chronic pyelonephritis and Glomerulosclerosis. Whereas liver on microscopy showed Fatty liver and Cirrhosis. Spleen on microscopy showed disseminated Tuberculosis

We also encountered a case of hepatocellular carcinoma with splenic and intestinal metastasis.



Fig 2. Thickened pleura with multiple nodules in lung

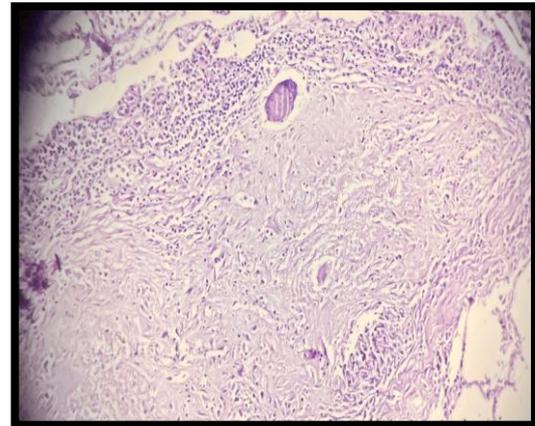


Fig 3. Caseous Necrosis with Multinucleated giant cells (H & E, 200X)



Fig 4. Lung in Pneumonia

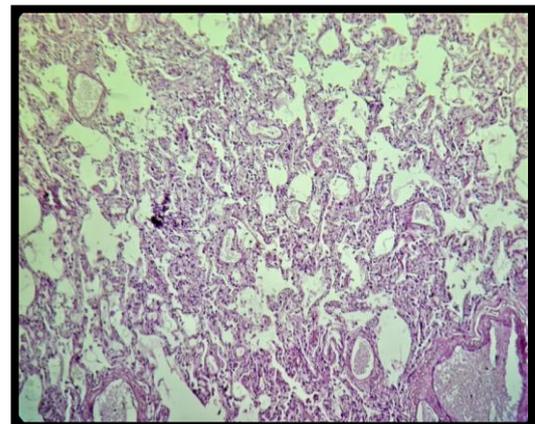


Fig 5. Pneumonia (H & E, 200X)

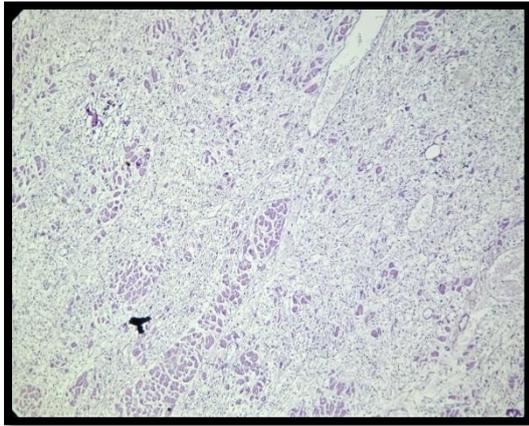


Fig 6. Fig Healed Myocardial infarction (H & E, 200X)

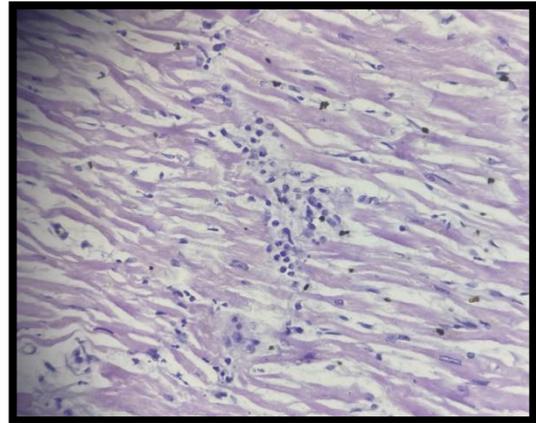


Fig 7. Acute myocardial infarction (H & E, 400X)



Fig 8. Liver with tumor



Fig 9. Separately received tumor tissues

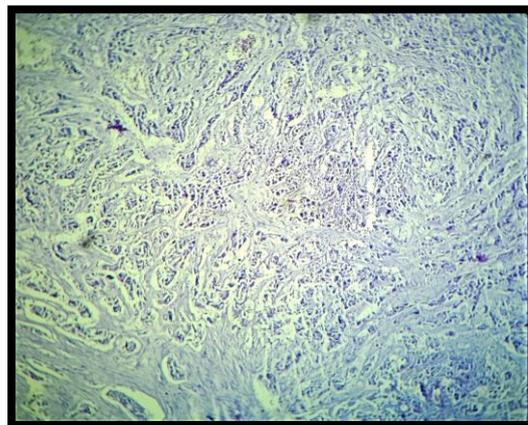


Fig 10. Section from Liver (H & E, 200 X)

DISCUSSION

An integral element of forensic pathology is the correlation between the circumstances of death and the pathological and toxicological findings of the postmortem examination. A sudden custodial restraint death frequently demonstrates less pathological elements than it may be found in other death cases. With less anatomical findings, history, circumstantial, and scene investigation examination becomes of paramount importance. Death of a prisoner is always a serious concern for prison administration. The findings in this study that male prisoners constituted the majority of deaths in prison may be explained by the fact that males are more likely to be involved in criminal activities. Similar findings were reported in other studies as well in India^{6,4} and UK⁹. Majority belonged to the age group 41 to 50 years. In UK studies the age group 65-74 years had the maximum deaths. Multiorgan involvement was seen in significant number of cases. In other study conducted in Ranchi.⁸ Pulmonary tuberculosis was found to be the major cause of death. These findings however rules out any physical violence by police or jail authorities in most of the cases but it suggest improper health care facilities in jail, overcrowding, poor hygienic conditions in prisons and delay in responding to the medical issues of the jail inmates and no provision of isolation ward for communicable diseases. Also the motivation level required for compliance of treatment might be lacking in prisoners.

In our study myocardial infarction was found to be the most common cause of death. Similar findings were seen in UK studies⁹. This may be due to lack of proper medical facilities in the prison for early detection and treatment of hypertension, dyslipidemia and other factors responsible for myocardial infarction. De-addiction and rehabilitation services to addict prisoners and timely medical care to sick ones should be provisioned as a matter of right only a more humane approach towards prisoners and providing care and timely medical aid as a matter of right will go a long way to bring down the incidence of prison deaths in India

CONCLUSION

In present study (82.14% natural deaths) is in consonance with all the studies with almost 80%-90% natural deaths. Among natural deaths most common culprit was TB which was also observed in most of the studies.^{13,14,15} Other causes like sepsis, cardiac causes and carcinoma were also leading causes among natural deaths. Our study had only 32 cases, the results obtained may not be conclusive. We had various limitations, like non-availability of chemical

examination reports. Thus the cause of death was speculated based on brief clinical history, post mortem findings and histopathological findings only.

We conclude that the most common cause of death in prisoners was Acute myocardial infarction followed by Pulmonary tuberculosis.

Factors such as timely medical diagnosis and treatment facilities for quarantine in communicable diseases are few of the important issues related to the health care of the individuals in custody.

Thus it is important to maintain a positive frame of mind in the prisoners so that they comply with the health instructions given from time to time. The only limitation that can be considered is the retrospective nature of the study because of which we have got only limited amount of data. If more prospective studies are carried out we can come out with other additional hidden issues attributed to custodial deaths. Also Psychiatric illness & Substance abuse are not considered in our study due to non-availability of authentic information.

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Conflict of Interest: None.

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