



Deaths in Prisons: A 3 years retrospective study of histopathological findings in autopsies conducted at RIMS, Ranchi.

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ABSTRACT

Deaths either natural or unnatural in custody always raises suspicion about the atrocities carried out by the jail authorities or negligence on the part of administration. 100 cases of autopsy were carried out on persons in custody in the Forensic Medicine Department of RIMS, Ranchi during a period of three years between January 2013 and January 2016. The present study was carried out to know the cause of death and the major findings in the histopathological examination of organs provided to the Pathology Department of RIMS. Majority of cases were males (97%), and most number of cases were in the age group 51-60 years. Respiratory pathology was the leading cause of death (36%) and of these Pulmonary Tuberculosis was responsible for 11 deaths. Different type of malignancies resulted in death of 12 prisoners. The study concluded that improvement of overall living condition of prisoners and provision of timely and adequate health care measures can bring down the mortality and morbidity of jail inmates.

KEYWORDS : Death, Custody, Autopsy, Histopathology, Prison

Introduction:

Deaths either natural or unnatural in custody whether during arrest, in police lock-up, or in prison (jail), are usually associated with apprehension and community concern, and raises the 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 etc are raised. These are major human right issues and as per the directions of 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 report within 24 hours of autopsy[1]. Correspondingly studies conducted in few countries have shown that people in custody have increased rate of morbidity and mortality than those not in custody. [2,3]

Many of these deaths are premature deaths and can be prevented with proper care and treatment. In addition, having knowledge and data regarding such deaths is important to focus attention on prison medical services and can facilitate the implementation of preventive programs. Such studies would also guide the prison authorities in setting priorities for the allocation of their healthcare services and budget. [4]

To achieve the goal to prevent premature mortalities and morbidities in prisons of this tribal part of country, an updated study of mortality is required and such data is lacking in not only this part of India but also in other parts of India as well. Therefore, we undertook this study to examine the causes for deaths occurring in prisons of Jharkhand. The findings of this updated study of prisoner's mortality may be of help to prison's healthcare provider which are the responsibility of state-run public health services.

Materials and Methods: The present study was a retrospective study conducted in Rajendra Institute of Medical Sciences (RIMS), a leading medical institute of Jharkhand. During January 2013 and January 2016, autopsy was performed on 100 prisoners who died in

this hospital or in other hospitals of the state or died in prison itself and subsequently referred to this hospital for autopsy studies. The autopsies were carried out in the department of Forensic Medicine and the histopathological study was carried out in the department of Pathology. The age and sex of the cases was noted and the cause of death ascertained. The histopathological findings in autopsy cases and their correlation with those of gross findings during the autopsy procedure were done to come to conclusion. The data was collected and is being discussed.

Observations and Results: Between January 2013 and January 2016, a total of 100 autopsies were performed on prison inmates. Males constituted the majority of cases i.e. 97 while females constituted 3 cases only. The number of deaths in the age group 51-60 years was maximum (33 cases) followed by 41-50 group (27 cases). Diseases pertaining to the respiratory system were the leading cause of deaths (36 cases) followed by Genitourinary system (14 cases). Among the respiratory diseases, Pulmonary tuberculosis was responsible for 11 deaths of which one death was due to disseminated tuberculosis. Lobar Pneumonia was most prevalent among respiratory diseases (12 cases) followed by interstitial lung diseases(8 cases). Chronic obstructive pulmonary diseases (COPD) was responsible for four deaths. Lung abscess was seen in one case. Among the genitourinary conditions, Interstitial nephritis was found in 6 cases, chronic diffuse glomerulonephritis was seen in four cases and Cloudy swellings were seen in 4 cases. Cardiac failure was the leading cause of death due to cardiovascular system followed by Ischemic heart diseases (3 cases). Central nervous system was involved in 7 cases. Three cases of cerebral oedema, one cases each of Meningitis, Encephalitis, Cerebral infarcts and Subdural hematoma were also seen. Gastrointestinal system was primarily involved in cause of death in nine cases. Cirrhosis of liver was responsible for seven deaths. One case of Liver abscess was also seen. Neoplasms were responsible for 12 deaths. Adenocarcinomas were the most prevalent and one case each of Squamous cell carcinoma, Chronic Myeloid Leukemia and Non-Hodgkin's

Lymphoma were also seen. Lung was the most common site for malignancies (3 cases), all being adenocarcinomas. One case each of Hanging, Insect bite and Kerosene poisoning were also present.

Discussion:

Death of a prisoner is always a matter of serious concern for prison administration. Sometimes such deaths lead to law and order problems. Deaths in jails have been broadly classified into two categories i.e. natural deaths and unnatural deaths. Unnatural deaths include suicide, murder by inmates, death due to firing, death due to negligence or excesses by jail personnel etc. A total of 1,584 prisoners have died in jails due to both natural and unnatural causes during 2015 in the country out of which 1,469 were natural deaths and 115 were due to unnatural causes. Natural deaths accounted for 92.7%(1,469 out of 1,584) of the total deaths. Uttar Pradesh has reported the highest number of deaths due to natural causes(302) followed by Punjab (173), Madhya Pradesh (131), Maharashtra (107) and West Bengal (86) during 2015. In Jharkhand it was reported 42 out of 1584. Among 42 majorities were due to natural cause. [5]

The findings in this study that male prisoners constituted the majority of cases of deaths in prison may be explained by the fact that males are more likely to be involved in criminal activities and hence they outnumber females in the jail. Similar findings were reported in other Indian series [6,7] and in other developed countries like Canada [9], USA [8], Australia (10-12) and UK(13-15). The age group 51-60 years showed the most number of deaths followed by 41 -50 group. This is higher than the study at Chandigarh where age group 21-30 years was most prevalent [16] and it was lower than the UK study [14] where age group 65-74 had maximum number of deaths.

The current study found that the natural causes of death were more prevalent (97%) which is also reported by other studies in India[16], UK [13,14] and Australia[17]. One case each of hanging, Kerosene poisoning and insect bite were present in this series.

Respiratory pathology lead to maximum number of deaths which is similar to several other studies [13,16]. Lobar pneumonia continues to be a major health problem in our society and crowded places like jail provide the perfect environment for spread of respiratory infections. That is depicted in this study where 12 cases of pneumonia and 11 cases of pulmonary tuberculosis were seen of which one case involved multiple organs including lung. Such cases are included in pulmonary tuberculosis as per RNTCP (Revised national tuberculosis control program) guidelines [18].This is fair reflection of our society. Also the motivation level required for compliance of treatment might be lacking in the prisoners. Interstitial lung diseases were responsible for eight deaths. This reflects upon the fact that Jharkhand state is rich in minerals and interstitial lung diseases are quite common in people involved in mining industry. Genitourinary pathology was the second most common cause of death in this study and end stage renal disease was a common finding in the histopathological study. Cardiovascular causes were the third leading cause of death whereas they are leading cause of deaths in other studies in UK [2,14]. Cirrhosis of liver was found in seven cases which signifies the importance of alcohol liver diseases leading to cirrhosis and many prisoners are alcoholics as well. Malignancies were responsible for 12 deaths, most of the cases being adenocarcinoma. Carcinoma of lung was the most common organ for development of carcinoma which again the leading cause of death worldwide.

Conclusion:

Deaths of jail inmates be cannot be avoided but the incidence can be controlled by improving the infrastructure of the jails. Males constitute the maximum number of cases of death in prison and respiratory diseases are the leading cause of deaths. Proper health facilities should be provided to the jailed persons and quick referral system should be in place to tackle those seriously ill. Also it is

important to maintain a positive frame of mind in the jailed persons so that they comply with the health instructions given to them from time to time. This can be achieved by involving them in extracurricular and cultural activities. Also this study gives an indication of different health problems persistent in the society in general and government should pay attention to existing health problems.

Table 1: Sex-wise distribution of cases

Sex	No. of cases (%)
Male	97 (97%)
Female	3 (03%)

Table 2: Age-wise distribution of cases

उम्र समूह (वर्ष)	K_jc	Dck_jc	Rnr_j_a_qcq	#
0/-30	8	1	9	9
31-40	14	2	16	16
41-50	27	Nil	27	27
51-60	33	Nil	33	33
More than 60	15	Nil	15	15

Table 3: System-wise causes of death

{TUG} ÅzTGr	b □ □ zTÅs(b □ □ 100)	□
/ År-bÅTj ÅnCTG	13	13
Central nervous system	07	07
Gastrointestinal system	09	09
Genitourinary system	14	14
Malaria(MP)	02	02
Neoplasm	12	12
Respiratory system	25	25
Tuberculosis	11	11
others	07	07
Total	100	100

Table 4: Histopathological diagnosis in the autopsy cases:

F grrm_rf njnega_j diagnosis	L m nrl cases	#
? bcl ma pag nk _ @pc_qr	01	01
Adenocarcinoma Liver	01	01
Metastasis in liver	02	02
Carcinoma Tongue	01	01
Carcinoma gall bladder	01	01
Carcinoma lung (Adenocarcinoma)	03	03
Carcinoma Pancreas	01	01
CML	01	01
NHL	01	01
Cerebral oedema	03	03
Lung consolidation	12	12
Interstitial lung disease	08	08
Pyogenic lung abscess	01	01

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