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A Prospective Study of HIV Positive Autopsies Conducted At Bapuji Hospital and Research Center, Davangere

Dr. Santhosh C. S.
Associate Professor, Department of Forensic Medicine, J.J.M. Medical College, India
Dr. Vishwanathan K. G.
Professor & Head, Department of Forensic Medicine, J.J.M. Medical College, India
Dr.Siddesh R. C.
Post graduate student, Department of Forensic Medicine, J.J.M. Medical College, India
Dr. Ashok Gupta
Post graduate student, Department of Forensic Medicine, J.J.M. Medical College, India

Abstract:
During the 5-year-period from January 2008 to December 2012, 6 antibody HIV positive cases were autopsied at the Department of Forensic Medicine & Toxicology in J. J. M. Medical College, Davangere. The purposes of this study were to report the autopsy findings of anti-HIV positive individuals, and to identify the prevalence of specific factors such as gender, age, postmortem findings, cause and manner of death. The 61 anti-HIV positive individuals who died at Bapuji Hospital and research centre, Davangere consisted of 35 males and 26 females. Here, 55 cases died from natural cause, 6 cases due to unnatural causes termed as medico legal death, which included 2 cases of accidents and 4 cases of suicide. All Medico legal cases underwent full autopsy with universal precautions. The prevalence of anti-HIV positive underlined the importance of awareness of HIV transmission in forensic casework. In conclusion, full autopsies should be performed regularly on HIV infected patients with due protective measures not only for medical research, but also for forensic study.

***Key words**: Autopsy, Cause of death, Manner of death, Anti HIV positive medico legal deaths*

1. Introduction

Autopsies serve a variety of useful and important roles not only for forensic medicine purpose but also for medical researches [1, 2]. Since the first case of AIDS have been reported, there were many autopsy studies of HIV infected person in many countries around the world [3, 4, 5.6, 7, 8]. In developed countries, the range of opportunistic infections and their contributions to morbidity and mortality in HIV -infected persons are well document. There are many cases of autopsies done on anti HIV positive individuals, which are medico legal cases, though the death in substantial number of the HIV infected individuals are natural due to opportunistic infections in developing countries. The prevalence of anti HIV positive cases at medico legal autopsies in a developing country like India will reflect the incidence of these cases. Great care should be administered and universal precautions should be adopted while conducting the autopsy. Therefore, a Prospective study of anti HIV Positive autopsy cases analyzed by statistical method to create useful database in this region was undertaken. This study was pinpointed into the examination and description of the cause and manner of death, postmortem findings and the association between cause and manner of death, and specific factors in HIV positive cases which has not been reported before.

2. Material and Methods

This study, conducted between January 2008 to December 2012, which included 61 anti HIV positive inpatient deaths at Bapuji Hospital and research centre, Davangere, out of which 55 were natural deaths and 6 were Anti HIV positive medicolegal deaths.
These 6 cases were autopsied at the Department of Forensic Medicine & Toxicology, JJM Medical college, Davangere during the year 2008 to 2012. The data was collected regarding the age and sex wise distribution of cases, year wise distribution of cases, marital status and occupation of the individuals, manner and cause of death. The data thus obtained was statically analyzed and depicted in the results.

3. Results

This study showed that out of 6 anti HIV positive medicolegal cases autopsied there were 3 cases of anti HIV positive medicolegal deaths that were autopsied in 2010 and 2 cases in 2011 and 1case in 2009 and there were no anti HIV positive medicolegal deaths in the year 2008 and 2012. (Table 1)

Out of 55 numbers of deaths due to natural disease 8 cases in 2008, 27 cases in 2009, 2 cases in 2010, 8 cases in 2011 and 10 cases in 2012 at Bapuji hospital and research center, Davangere.(Table-1)

In our study out of 6 cases there were 4 males (66.66%) and 2 females (33.33%). Out of 4 males 2 were in the age group of 41-50 years and 1 each in the age group of 21-30 years and 31-40 years. Among the 2 female cases 1 each were in the age group of 21-30 years and 31-40 years. (Table 2)

Our study which included 6 anti HIV positive medicolegal cases were all married. (Chart -1)

The occupations of the deceased were Drivers 2(33.33%), Farmer 1(16.66%), Housewife 2(33.33%) and Unemployed 1(16.66%). (Chart 2)

In our study, out of total 61 cases 55 cases (90.16%) died from natural disease at our hospital, 4 cases (6.55%) from committing suicide, 2 cases (3.27%) from accident. There were no Homicidal deaths. (Table-3)

In our study, among the 4 suicidal deaths 2 cases died due to consumption of poison and other 2 cases died due to hanging. The 2 accidental deaths were due to road traffic accidents and the deceased were drivers of heavy vehicles. (Table-4)

4. Discussion

All violent and unnatural deaths are subjected to forensic autopsy to know the cause and manner of death. Most of the cases of anti HIV positive individuals will die due to many opportunistic infections and are classified as a natural death. In our study out of 61 cases of hospital deaths, 55 cases (90.16%) died due to natural disease and 6 cases (9.83%) died due to unnatural causes which were autopsied. Our study is quite similar to the study conducted at Ramathibodi hospital [9] where 76.5% died due to natural disease and 22% were medico legal deaths.

In our study, the age group of 21-30 years, 31-40years and 41-50 years all involved 2 cases each and male predominance was seen.

But by and large the age group of 21- 30 years are more commonly involved as per the study conducted at the morgue of the city of Sao Paulo [10] and males were commonly involved in all the age groups. This may be attributed to the movement of male populations from place to place in search for jobs and other needs and more particularly the age group of 21-30 years being young are exposed more to unprotected sexual intercourse than being more commonly involved.

Our study showed that all the cases were married (100%) and driver (33.33%) and housewife (33.33%) were more commonly involved. This proves that the drivers of heavy vehicle are at more risk as they stay away from the home for weeks or months and are exposed to unprotected sex, on the other hand house wives being the recipient and contract this deadly disease through their husband.

On considering the manner of death , In our study out of 61 deaths at our hospital, 55 cases (90.16%) died due to natural disease, 4 cases (6.55%) died due to suicide and 2 cases (3.29%) died due to accidents. There were no homicidal deaths in our study. The most common method adopted for committing suicide were poisoning (33.33%) and hanging (33.33%). The 2 cases (33.33%) of road traffic accidents, the deceased were drivers of heavy vehicles.

The studies conducted by Maccario,M , Scharre, D.W [11]and Reichert,C.M., O'leary, T.J., Levens, D.L., Simrell, C.R. & Macher, A.M.[12] prove that suicide is not related to the presence of encephalopathy or Psychosis, which develop later in the course of the syndrome.

5. Conclusion

This study reflects the magnitude of anti HIV positive medico legal deaths in our region. Performing a full medico legal autopsy on these anti HIV positive medico legal cases requires greater precautions especially universal work precautions has to be adopted in each of these cases to prevent risk of HIV transmission among the forensic workers. There is a need for further study to look into why the suicidal rates are more common the anti HIV positive individuals.

To conclude there is a very little information regarding the number of autopsies of anti HIV positive medico legal deaths in developing country like ours. This suggests that each & every centers conducting autopsies should come up with such studies to reflect the magnitude of occurrence of these deaths.

6. Acknowledgement

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7. References

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YEAR	2008	2009	2010	2011	2012	Total	Percentage
TOTAL NO. OF HIV CASES ADMITTED	86	112	75	255	142	670	-
TOTAL NO. OF DEATH DUE TO NATURAL DISEASE	08	27	02	08	10	55	90.16%
TOTAL NO. OF UN-NATURAL DEATHS (MEDICOLEGAL CASES AUTOPSIED)	NIL	01	03	02	NIL	06	9.83%
TOTAL NO. OF DEATHS	08	28	05	10	10	61	100%

Table 1: Year Wise Distribution of Anti HIV Positive Hospital Deaths

GENDER / AGE	MALE	FEMALE	TOTAL	PERCENTAGE
<11 YEARS	0	0	0	0
11 TO 20 YEARS	0	0	0	0
21 T0 30 YEARS	1	1	2	33..33
31 TO 40 YEARS	1	1	2	33.33
41 TO 50 YEARS	2	0	2	33.33
>50 YEARS	0	0	0	0
TOTAL	4 (66.66%)	2 (33.33%)	6 (100%)	100 %

Table 2: Age and Sex Wise Distribution of Cases

MANNER OF DEATH	NO. OF CASES	PERCENTAGE
1) NATURAL	55	90.16%
2) ACCIDENTAL	2	3%
3) SUICIDAL	4	6.55%
4) HOMICIDAL	0	0%
TOTAL	61	100%

Table 3: Manner of Death among Anti HIV Positive Cases

CAUSE OF DEATH	NO. OF CASES	PERCENTAGE
1) POISONING	2	33.33%
2) RTA	2	33%
3) HANGING	2	33.33%
TOTAL	6	100%

Table 4: Cause of Death among the Anti- HIV Positive Cases

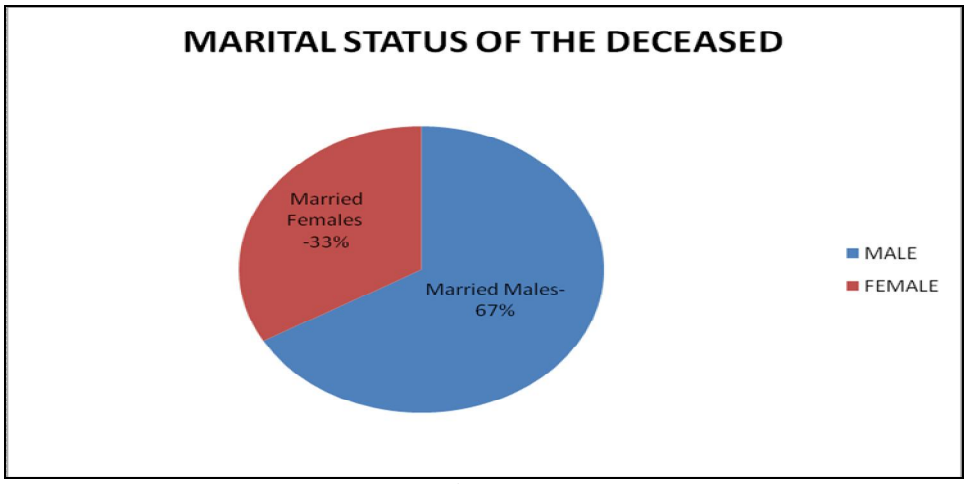

Figure 1

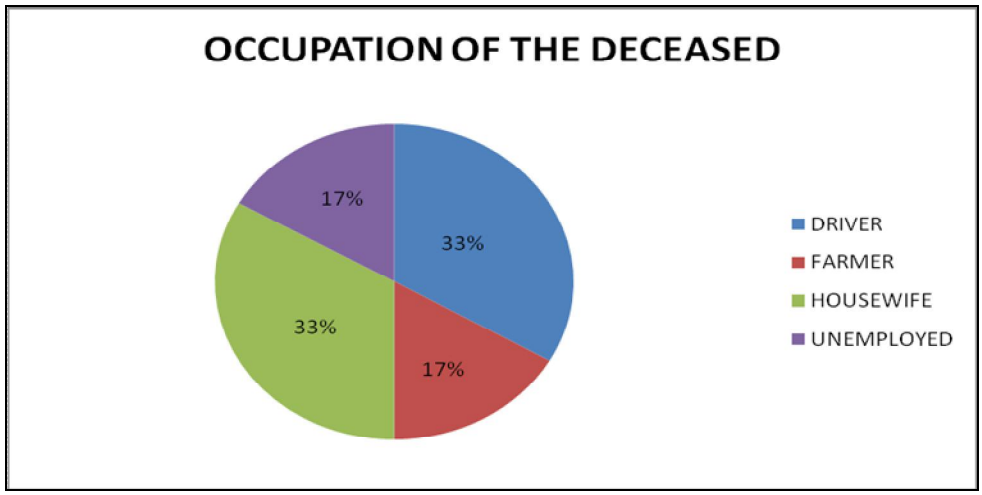

Figure 2