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Pattern of Cause of Death and Injuries in Unknown Dead Bodies

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ABSTRACT

Aims and Objectives: To establish the identify and to study the pattern of injuries and cause of deaths in these cases. **Study Design:** Retrospective Study. **Setting:** Autopsy unit of Forensic Medicine and Toxicology Department Faisalabad Medical University Faisalabad, Pakistan. **Duration of Study:** 3 years from 1-1-2013 to 31-12-2015. **Sample Size:** 134 cases. **Sampling Technique:** Convenient Sampling. **Data Collection Procedure:** Unknown dead bodies brought in autopsy unit of Forensic Medicine and Toxicology department of Faisalabad Medical University Faisalabad during the period of three years 2013 to 2015. Data regarding these cases was compiled from the postmortem reports, Police papers and limiting counseling with different Investigating officers and Forensic Experts. **Results:** The number of cases were 134/1007 cases out of which 80% male 20% were female and most vulnerable age group is 21-50 years and maximum cases were reported in summer session. In maximum cases, death was due to vehicular injuries 23 (17.1%), gunshot deaths were 18(13.4%) and by blunt means, 10 cases (7.46%) 18 cases (13.4%) were by poisoning and 2 cases (1.4%) where due to Ischemic heart disease while in 23 cases (17.1%) were declared undetermined (negative autopsy), **Conclusion:** The identification and cause of death can be find out by keen attention and interest of Forensic Experts and investigating officer along with the help of DNA and finger printing techniques.

Keywords: Unknown body, forensic identification, pattern of injuries, cause of death.

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INTRODUCTION

Unidentified bodies mean those bodies not yet identified; The process of identification is a daily occurrence in life in both civil and criminal cases.[1,2,7]

However, the object of autopsy is to determine the identity of the person along with the cause, manner, time since death and in all cases especially unknown bodies it is necessary to note all particulars such as Race, Religion, Sex. Age, Social status, Height, Weight, Dental formula.[4,9]

It's the primary duty of investigating agencies to investigate regarding identification and manner of death in unknown cases in our society. The culprits hide the identification of victims by different means like acid throwing, railway accident, after homicidal death showing RTA. The motive of study is to establish the forensic identity and analyze the efforts on the part of investigating officer and forensic expert and to study the pattern of cause of death and most common injuries on unknown dead bodies.

METHODOLOGY

Data Collection Procedure: Unknown dead bodies brought in autopsy unit of Forensic Medicine and Toxicology department of Faisalabad Medical University Faisalabad during the period of three years 2013 to 2015. Data regarding these cases was compiled from the postmortem reports, Police papers and limiting counseling with different Investigating officers and Forensic Experts.

Study Design: Retrospective Study.

Setting: Autopsy unit of Forensic Medicine and Toxicology Department Faisalabad Medical University Faisalabad.

Period: 3 years from 1-1-2013 to 31-12-2015.

Sample Size: 134 cases

Sampling Technique: Convenient Sampling

Inclusion criteria;

1. Total autopsies done 2. Unknown dead bodies
3. Both genders

Exclusion criteria;

1-Deadbodies which were become known.

RESULTS

The numbers of autopsies in three years were 1007 and the number of unknown dead bodies were 134/1007 cases out of which 80% male 20% were female.

Table 1: Year distribution

Cases	2013	2014	2015	Total
Total autopsies	377	323	307	1007
Male	289	231	246	766
Female	88	92	61	241
Unknown Dead Bodies	39	39	56	134

Total Cases: 1007. Unknown 134 (13.30%)

The percentage of males unknown dead bodies is 80% as compared to females which is 20% showing male dominance. Table 2.

Table 2: Year and gender distribution

Gander	2013	2014	2015	Total	%age
Male	33	27	47	107	80
Female	6	12	9	27	20
Total	39	39	56	134	100

When we compare the age groups, the most vulnerable age group is 21-50 years and maximum cases lies among these years of age due the vast exposure to environmental risks. Tab,3 fig,1.

Table 3: Year and age groups

Age group	2013	2014	2015	Total	%age
0-10	4	4	1	9	6.7164
11-20	2	0	2	4	2.9851
21-30	8	13	12	33	24.6269
31-40	16	11	21	48	35.8209
41-50	6	8	10	24	17.9104
50 & above	3	3	10	16	11.9403
Total	39	39	56	134	100

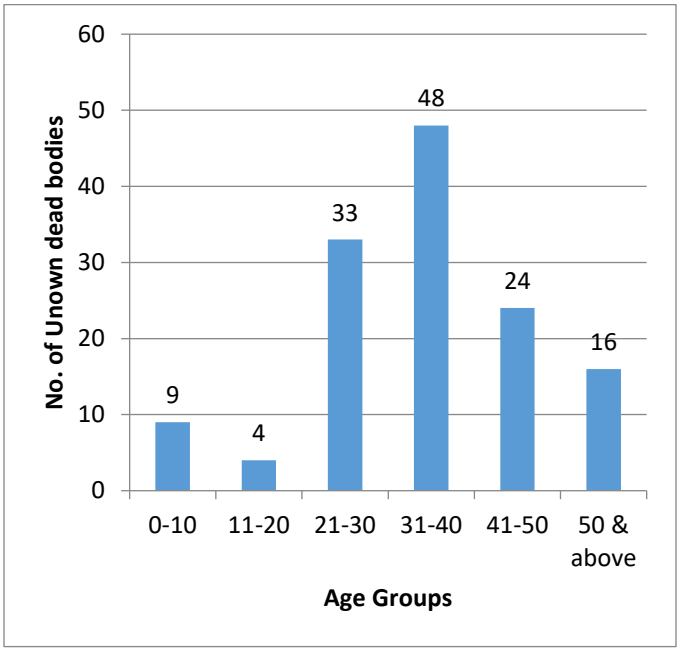

Figure 1: Age group distribution

In maximum cases, death was due to vehicular injuries 23 (17.1%), gunshot deaths were 18(13.4%) and by blunt means, 10 cases (7.46%) 18 cases (13.4%) were by poisoning and 2 cases (1.4%) where due to Ischemic heart disease. Table 4, figure 2.

Table 4: Year and cause of death

Cause	2013	2014	2015	Total	%age
Firearm	5	8	5	18	13.4%
RTA	11	5	7	23	17.1%
Poison	5	3	10	18	13.4%
Drowning	2	3	0	5	3.73%
Burn	1	0	3	4	2.9%
Asphyxial Death	0	5	0	5	3.73%
Un-determined	5	6	12	23	17.1%
Sharp edge	0	0	2	2	1.4%
Awaited	8	4	12	24	17.9%
IHD	2	0	0	2	1.4%
Blunt	0	5	5	10	7.46%
Total	39	39	56	134	100

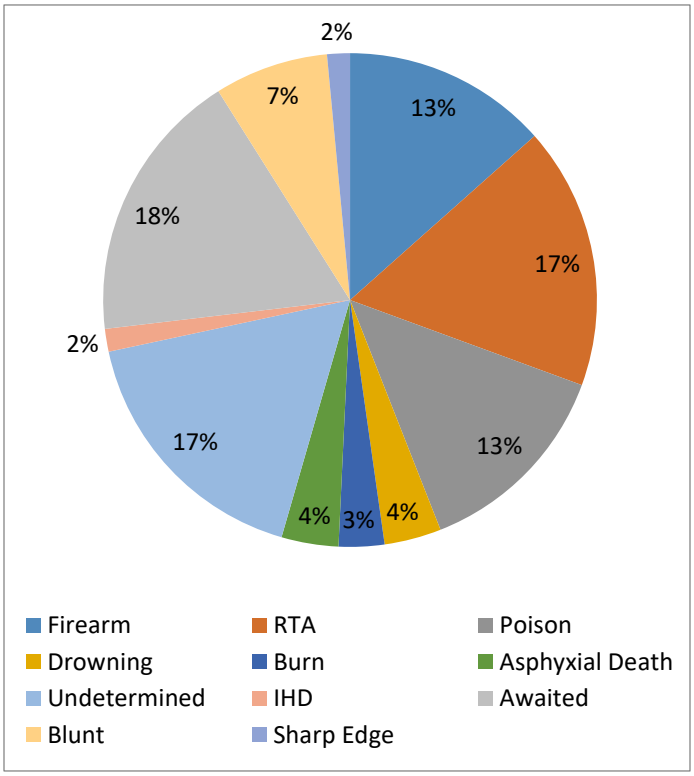

Figure 2: Distribution of cause of death

When we compare seasonal variation, the maximum cases were reported in summer session from April to October. Table 5, fig-3.

Table 5: Year & month distribution

Month	2013	2014	2015	Total	%age
January	2	3	2	7	5.22
February	1	3	5	9	6.72
March	3	3	3	9	6.72
April	5	0	11	16	11.94
May	2	3	13	18	13.43
June	2	4	4	10	7.46
July	5	4	5	14	10.45
August	3	6	3	12	8.96
September	6	2	5	13	9.7
October	5	3	2	10	7.46
November	3	2	2	7	5.22
December	2	6	1	9	6.72
Total	39	39	56	134	100

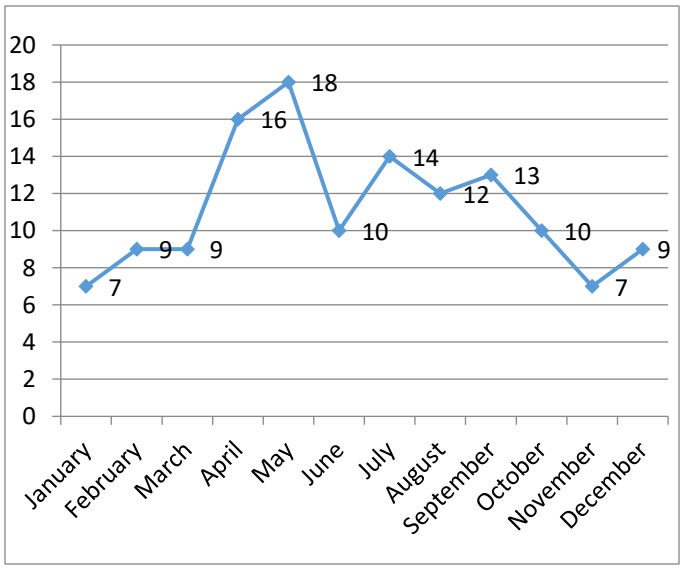

Figure 3: Distribution over months

DISCUSSION

During the years of 2013 -2015, a total of 1007 cases were reported in postmortem unit of forensic medicine department FMU. Out of these134 cases, 107(80%) cases were male and 27 (20%)were female. (table 1)

The maximum number of cases were reported in the age group 31-40 (35.8%),[1,2] followed by age group of 21-30 (24.6%), and 41-50 (17.9%), (Table 3). So, the maximum incident range of age group is 21-50 years (78.9%), this age group is supposed to be most vulnerable age group in almost all environment risks.

Viewing the month wise distribution, maximum cases where reported in the months from April to October (table 5) which were 93 (69.4%) of 134 cases and the months of maximum cases were April and May as shown in table 5 and Fig. 3.[8]

Opinion regarding the cause of death was given just after the autopsy in 67(50%) cases and in the remaining 50% cases, viscera were send for Chemical and Histopathological analysis to forensic science agency Lahore.

In maximum cases, death was due to vehicular injuries 23 (17.1%), gunshot deaths were 18(13.4%)and by blunt means, 10 cases (7.46%) (table 4 fig 2)[3,5]

In remaining 67 cases (50%), 20 cases where declared after receiving report from Punjab forensic science agency Lahore, in these cases 18 cases (13.4%) were by poisoning and 2 cases (1.4%) where due to Ischemic heart disease while in 23 cases (17.1%) were declared undetermined (negative autopsy) and 24 cases (17.9%) are still in awaiting criteria.

Efforts of identification of unknown dead bodies on behalf of police were made as, photographs in local and national newspapers, on cable networks and announcements were made in the mosques of relevant area of recovery of dead bodies.[6,10]

As regards the autopsy surgeon gives a detailed record of facial features, complexion, eye color, apparent age, any tattoo mark, surgical scar, any congenital or acquired anomaly, any denture or implanted teeth along with photographs from different views are saved for future enquires.[1,2,11]

CONCLUSION

The percentage of unidentified dead bodies in the city of Faisalabad during 2013- 2015, a three-year period was 13% of total cases i.e. 134 out of 1007 cases. 80% were male and 20% were female. Most susceptible age group was 21-50 years. Maximum cases were reported in summer season. Cause of death in young was vehicular injuries, gunshot injuries and poisoning. 23 cases (17.1%) were declared undetermined (negative autopsy) and 2 (1.4%) died due to natural process.

Regarding identity of dead bodies, Forensic anthropologist and forensic odonatologist can play a key role in establishing identity of the dead in mass disasters, plane crashes and earth quakes. DNA and fingerprinting along with thorough examination of dead bodies must be done in each and every case even if it seems very simple and straight forward so as to ensure that justice is served in everyone.

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Dr. Humera Arshad Associate Professor, Department of Forensic Medicine and Toxicology Faisalabad Medical University, Faisalabad	Methodology & Results	
Dr. Mobin Inam Pal Assistant Professor, Department of Forensic Medicine and Toxicology Faisalabad Medical University, Faisalabad	Discussion & Final layout