SCIENTIFIC ANALYSIS OF AUTOPSIES: FIGURES FROM THE MEDICO-LEGAL SECTION OF LIAQUAT UNIVERSITY HOSPITAL, HYDERABAD, PAKISTAN

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Abstract:

Human society is full of variety stories associated with each individual from birth to death all is about happiness and worries, friendship and enmity, sincerity and jealousy. Forensic medicine helps the judicial proceedings by exploring the scientific realities behind the screen that is not visible to an observer or judgement maker. The current is based on the one year from January 2015 to December 2015 cases presented to forensic department of LUMHS. Total 217 cases were brought for autopsies from different areas of the Hyderabad region. Majority of the cases were male 174(80.2%) and 43(19.8%)were females. Top most cause was RTA (road traffic accident)98 (45.2%) ,59(27%) Fire Arm Injury 22(10.1%) AsphaxialDeath ,12(5.5%) assaults and 9(4.1%) were Train Accidents. Minimum age found was 4years and maximum was noted 75 years with mean and standard deviation of 34.13$\pm$14.91 years. Descriptive analysis was carried out on SPSS Version 22 and frequency, mean, SD, minimum and maximum were determined for various variables.

Conclusion:Male gender is more involved with maximum cases from the RTA followed by Fire arm and most of the cases were from the middle age group.

Key Words: *Autopsy, RTA, fire arm, asphaxia.*

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INTRODUCTION:

The human life is the most precious gift of the God on the earth and definitely every living has to return back to his creator in the form of death that follows certain natural rules like extremity (old age),chronic illness or accident. Any death deviating from the natural phenomena invite scientific investigations to probe intoany possible manipulated cause. Postmortem examination (Autopsy), a hot debatable issue of the 15th -16th centuries in the social and religious circles finally became the gold standard to rule out the suspicious deaths around the globe.Scientific evidence help the law for justice and gives a satisfaction to the mourned relatives.Deaths rate due to natural cause is 10 times more than the death with unnatural causes and in 60.3% of cases there is a single cause in 26.6% cases two causes are reported.[1].Autopsy is an invasiveprocedure opening the body cavities and taking the fluid and various tissue for analysis but advancement in scientific technology it was modified first into minimal invasive autopsy(MIA) and then into virtopsywith the involvement of CT(computed tomography),MRI(magnetic resonance imaging), photogrammetry-based two and three-dimensional (2D, 3D) optical scanningaugmented byminimally invasive angiographic techniques. This advancement has led to many advantages like quickdiagnosis of death cause, reproducible data collection, independent and less likelihood of contamination but high cost and artifactsetc[2]. Six countries were reported to constitute >50% of the all-cause maternal mortality including Afghanistan, Congo, Ethiopia, India, Nigeria and Pakistan[3] Despite of these advancements in 2/3 of the countries people don't register the death so the information about the cause remains non-reliable probably due to the fact that 50% death occur in remote areas[4].kidney disease account for the death of 90,000 Americans every year and ranked as 9th among leading causes review of autopsy reports have proved for missing the identification of renal lesions in 60% of cases[5]. There is not doughty that autopsies do have some errors and discrepancies ranging from 30%-38% as reported by literature [6] Current study was conducted to observe the pattern of medicolegal death cases presented to the concerned section of the Liaquat UniversityHospital,Hyderabad Pakistan.

METHODOLOGY:

The current study was conducted in the medicolegal section of the Liaquat UniversityHospital, Hyderabadof Liaquat University of Medical & Health Sciences Jamshoro. All medicolegal death cases of any age of both genderswere included in the study while all other medicolegal cases were excluded from the study. Information was obtained by the medicolegal officer of the concerned section on a proforma with details of the diseased like age, gender, address, habits. Mean and SD of the age was calculated while frequency and percentage was calculated for gender, month of presentation, particular age range and for the cause of death using SPSS Version22.

RESULTS:

Mean age of the subjects was found to be 34.13+14.91 years with 4 years as minimum and 75 years as maximum age. Male component was 174(80.2%) while females were 43(19.8%) (Figure 2)with RTA (road traffic accident) on top of list for cause of death 98 (45.2%) followed by fire arm injury 59(27%) , asphyxia 22(10.1%) ,assaults 12(5.5%) and train accidents were 9(4.1%), 5(2.3%) each from undetermined and others while 3(1.38%) each from poisoning and reserved while only 1(0.46%) was found for electric shock.(Figure01) Maximum cases were in 26-35 years64(29.49%) followed by 50(23.04%), 40(18.23%), 30(13.82%) from age ranges 16-26years, 35-45years and 45-55respectively. Children 4-15 years were 18(8.29%), while 9(4.15%) were from55-65 years and 6(2.76%). (Table 1) According to monthly distribution maximum cases were found in January 30(13.8%) followed by March and December with 24(11.1%) and 23(10.6%) respectively.(Table 2).

Table 01: Frequency and percentage in terms of age ranges

Age Range	Frequency	Percentage
4-15 Years	18	8.29%
16-25 Years	50	23.04%
26-35 Years	64	29.49%
35-45 Years	40	18.43%
45-55 Years	30	13.82
55-65 Years	9	4.15%
65-75 Years	6	2.76%
Total	217	100%

Table 02: Month wise distribution of frequency and percentage of cases

Month	Frequency/Percentage	Month	Frequency/Percentage
January	30(13.8%)	July	12(5.5%)
February	17(7.8%)	August	13(6.0%)
March	24(11.1%)	September	16(7.4%)
April	21(9.7%)	October	15(6.9%)
May	13(6.0%)	November	20(9.2%)
June	13(6.0%)	December	23(10.6%)
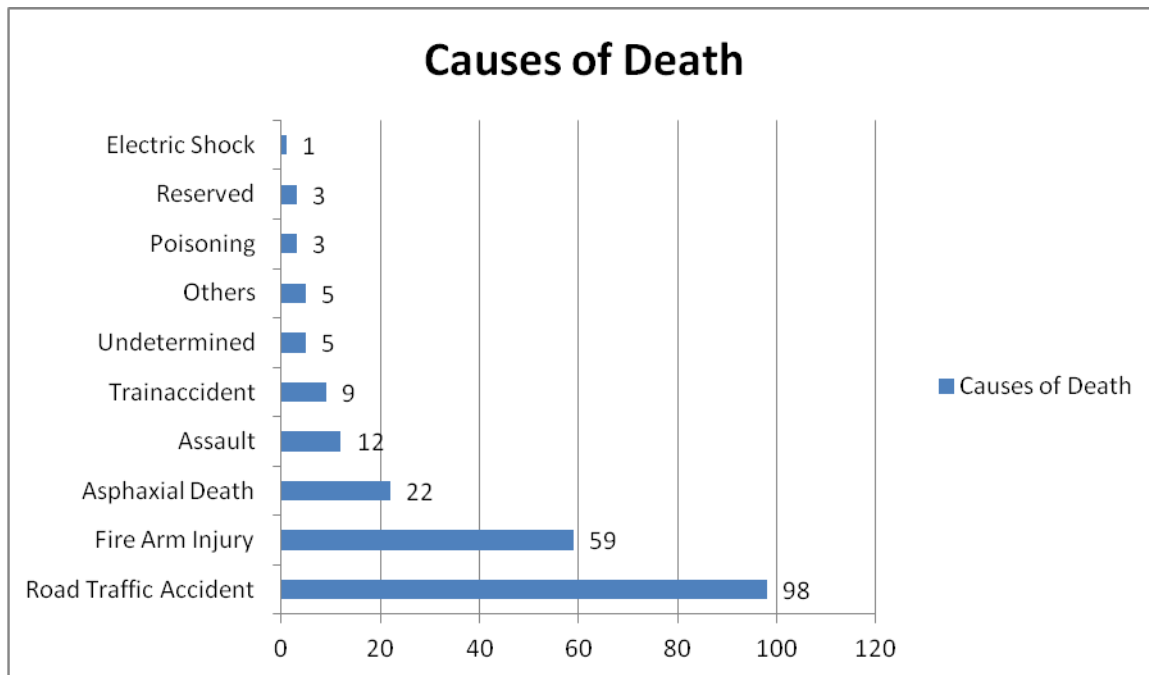
Figure 01. Distribution of Causes of death
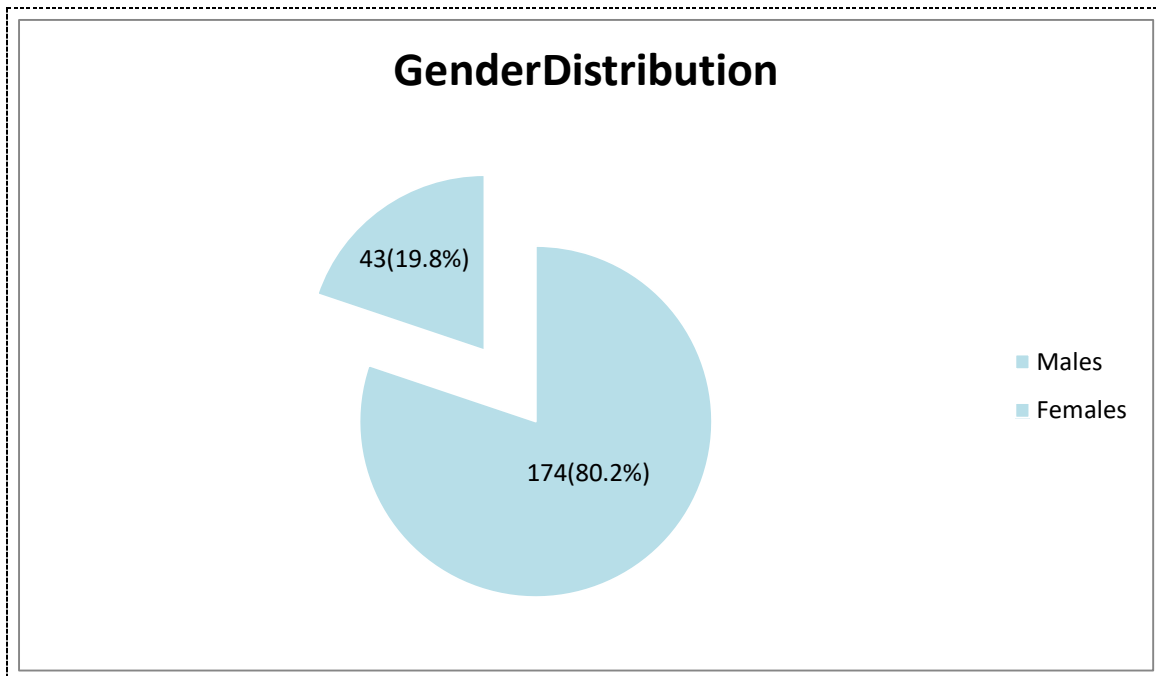
Figure 01. Gender Distribution

DISCUSSION:

Many researchers have published their regional data in this aspect of the scientific field of forensic medicine Gupta M et al (2018) mentioned 104 deceased without any treatmentwith 70(67.3%) males and 34(32.7%), and highest percentage 29.8% belonged to age range 20-40-year that is consistent to our results[7].He reported sudden death either due to injuries or attacks but neglect in old age cases as the cause of death.Results of study by Ardawan J. Rastan et al (2005) were inconsistent to our results as he reported 68.7 years as mean age of his study populationwhile cause of death in 49.8% was cardiac, 8.3% respiratory, 6.4% cerebral, 4.7% abdominal,14.9% sepsis and surgery associated 8.3% [8].This inconsistency between the two studies is due to his specific population of cardiac surgery patients that died perioperative. MirazaFarhat et al (2013) in his research work on pattern of injuries in fire arm cases in 944 medico legal deaths with (931)98.62% were homicidal while 13(37%) were suicidal. Most affected 477(50.52%) age group was16-30 years. Male were reportedly 883(94.84%) and female were 48(5.16%)[9] that is partially consistent to our findings.Another study by Ullah A et al (2014)on 2025autopsies of homicidal cases and reported 1375(67.24%) males while females were 670(32.76%) females he also declared fire arm as the commonest cause of death 1230(60.14%). This study was also inconsistent to our results the possible difference is the regional culture their study was conducted in the KPK province where weapon are frequently carried in hands even in young child age[10].Studyby Farhat Hussain Mirza (2013) on2090 autopsies reported 581 (27.8%) cases of RTA , male and female involvement was 510 (87.8%) and71 (12.2%) respectively. Age range 19 and 40 years was more commonly involved. Cause of death was reported to be head injury in 386 (66.4%) and injury to chest was reported in 84 (14.5%) [11]. Qayas Ahmad et al (2016) evaluating the confirmatory diagnostic accuracy of autopsy reported that 65% diagnosis was missed while 35% of the diagnosis was in accordance with the autopsy findings [12]. The autopsy is so important that may help both parties justice the family of the victim as well as the societywith long impact on others. At the same time it may differentiate between suicide and murder as suicide is a common practice in depressive patients [13]. We could not cover many aspects of the task due to multiple reasons but suggest that an study nationwide comparing various region in terms of cultural values and variety of conditions should be conducted.

CONCLUSION:

Majority of cases were RTA and males were more involved and the age range from25-35 years was found involved in medicolegal cases.

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