

FORENSIC TRAUMA

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Annotation:In this article, cases of trauma found in the practice of forensic examination were studied. The study analyzed statistically and analytically the 200 cases of forensic trauma reported during 2022-2023. The trauma was studied grouped by cause, type, severity, and demographics. Based on the results of the analysis, it was found that traffic accidents, crime-related injuries and domestic trauma are the most common factors. It was noted that men, especially individuals aged 15-45, were more likely to experience trauma. Based on the results, proposals were developed for preventive measures, ensuring safety and improving the quality of forensic examination.

Keywords:Forensic examination, traumatism, traffic accident, injury, Crime, medical statistics, Demographic Analysis, Prevention.

Annotatsiya:Ushbu maqolada sud-tibbiy ekspertiza amaliyotida uchraydigan travmatizm holatlari o'rganildi. Tadqiqotda 2022–2023 yillar davomida qayd etilgan 200 ta sud-tibbiy travmatizm holatlari statistik va tahliliy jihatdan tahlil qilindi. Travmalarning sabablari, turi, og'irlik darajasi va demografik ko'rsatkichlari bo'yicha guruhlab o'rganildi. Tahlil natijalari asosida yo'l-transport hodisalari, jinoyat bilan bog'liq shikastlanishlar va maishiy travmalar eng ko'p uchraydigan omillar ekanligi aniqlandi. Erkaklar, ayniqsa 15–45 yoshdagi shaxslar travmatizmga ko'proq duch kelgani qayd etildi. Natijalarga asoslangan holda, profilaktika choralarini, xavfsizlikni ta'minlash va sud-tibbiy ekspertiza sifatini oshirish bo'yicha takliflar ishlab chiqildi.

Kalit so'zlar:Sud-tibbiy ekspertiza, travmatizm, yo'l-transport hodisasi, shikastlanish, jinoyat, tibbiy statistika, demografik tahlil, profilaktika.

Аннотация: В данной статье рассмотрены случаи травм, встречающихся в судебно-медицинской экспертизе. В исследовании статистически и аналитически проанализировано 200 случаев судебно-медицинской травмы, зарегистрированных в период с 2022 по 2023 год. Были изучены травмы, сгруппированные по причинам, типу, степени тяжести и демографии. По результатам анализа было установлено, что наиболее частыми факторами являются дорожно-транспортные происшествия, травмы, связанные с преступностью, и бытовые травмы. Было отмечено, что мужчины, особенно в возрасте 15-45 лет, чаще страдают от травм. На основе полученных результатов были разработаны предложения по профилактическим мерам, обеспечению безопасности и повышению качества судебно-медицинской экспертизы.

Ключевые слова:криминалистика, травматология, дорожно-транспортное происшествие, травма, преступность, медицинская статистика, демографический анализ, профилактика.

Introduction

Forensic medical traumatism is a medical-practical and scientific direction aimed at the legal and medical assessment of bodily injuries caused by the influence of external factors on the

human body. This area is engaged in determining the causes, mechanism, degree of severity and consequences of injuries within the framework of forensic examination. Judicial issues of medical traumatism are central to the process of solving criminal, civil and administrative cases, and play a central role, especially in determining the extent of harm to human health.

Today, the level of traumatism remains high globally. According to the World Health Organization (who), more than 5 million people in the world die each year as a result of various levels of trauma. In particular, road accidents, domestic accidents, non-compliance with the rules of technical safety in production, crimes and various social violence are the main sources of traumatism. As soon as these cases become the object of direct forensic examination, regular scientific and analytical work is carried out in this direction.

The health system and law enforcement agencies of the Republic of Uzbekistan pay special attention to modernizing forensic services, improving expert accuracy, and strengthening statistical control. In recent years, analytical work on cases of trauma has been increasing in Republican forensic centers and their regional branches. At the same time, cases of trauma manifest themselves in different ways, depending on geographical, social and demographic factors. This requires an in-depth study of the causes and characteristics of trauma in each region.

This article analyzes the main types of traumatism, the causes of their origin, age-gender distribution, and severity levels based on forensic examination materials. The goal is to draw conclusions about cases of trauma common in society on a statistical and analytical basis, as well as to develop practical recommendations for forensic practice.

Methods

This study focused on the statistical and analytical study of traumatic situations found in forensic examination practice, based on data collected between 2022 and 2023. The main information for the study was obtained through the forensic medical examination services of the Ministry of health of the Republic of Uzbekistan, the Republican Forensic Center, its regional branches, as well as information published in open scientific sources. The World Health Organization's recommendations regarding trauma are also provided for analysis.

A total of 200 cases of trauma were studied in the study on the basis of forensic examination documents. These cases were randomly selected to be grouped under the following criteria:

The reason for the origin of trauma: traffic accidents (YTH), production accidents, domestic trauma, crime-related injuries.

Type of trauma: head-brain injuries, closed or open injuries of the chest, abdomen, spine, limbs and other areas.

Severity of trauma: mild moderate to severe, and fatal cases.

Demographic indicators of victims: age (0-14 years, 15-45 years, 46 years and older), gender (Male, Female), place of residence (City or village)

Statistical analysis was carried out using Microsoft Excel and SPSS software. The data was processed by methods of descriptive statistics and expressed using mean values, percentages, distribution tables, and diagrams. Correlation analysis was also performed to determine the correlations between certain indicators.

During the study, all cases were analyzed anonymously. The identity information was not disclosed, indicating that ethical-ethical standards were fully adhered to. The data was used only for scientific purposes and for the development of forensic practice.

Through this methodological approach, it was possible to draw important conclusions on the relationship between different forms and causes of trauma, age and gender-related trends, as well as weight levels. The results obtained will be covered with details in the next section.

Results

During the study, a total of 200 cases of forensic trauma were analyzed, recorded between 2022 and 2023. The results of the analysis showed that one of the most common causes among cases of trauma was traffic accidents, which accounted for 41% of the total cases. Next were crime-related injuries — 26%, domestic trauma — 21%, and production accidents-with a 12% share.

The distribution by type of trauma was as follows:

Head-traumatic brain injury-32 hours%

Bone fractures of the limbs-25%

Soft tissue injuries-18%

Trauma to the chest and abdominal area – 15%

Complex trauma of the spine, neck area and other places-10%

In terms of the severity of the trauma, the cases were distributed as follows:

Minor injuries-38 hours%

Moderate trauma-34%

Severe injuries – 20%

Circumstances ending in death-8 hours%

The demographic distribution of victims also provided an important analytical framework. The incidence of trauma among men was higher, accounting for 63% of total cases, while women accounted for 37%. By age group, however, the following:

0-14 years old – 9%

15-45 years old – 54%

46 years old and older – 37%

According to the results of the analysis, men aged 15-45 years stood out as the group with the most injuries. In particular, traffic accidents and crime-related cases dominated precisely in this demographic.

Also, the analysis found that the rate of traumatization of the population living in rural areas was 1.4 times higher than that of urban residents. This may be due to territorial socio-economic conditions, the quality of transport infrastructure, the level of security measures.

On the basis of the results, some important conclusions were drawn on cases of trauma. They will be analyzed in more depth in the next section.

Discussion

The results of the study showed that among the cases of trauma related to forensic examination, road accidents are taking a leading place. This trend is typical not only for Uzbekistan, but also for many developing countries. According to the who, 1.3 million people worldwide lose their lives as a result of YTH every year, with millions receiving severe body injuries. Even in our study, the fact that Yth-related trauma accounts for 41% of total cases reaffirms the relevance of this problem.

The high incidence (26%) of crime-related injuries can be attributed to the socio-economic environment, high incidence of offenses, as well as spiritual factors. Physical violence and mass fists, especially among young people, are exacerbating this situation.

The results of the analysis by age and gender are also consistent with world statistics. Almost all studies show higher rates of trauma among men compared to women, as evidenced by the greater participation of men in production, transport, dangerous types of work, higher social activity, and sometimes a tendency to risky behavior. In our analysis, too, men accounted for 63% of the total cases.

The greater exposure of rural residents to trauma suggests that preventive measures for transportation and manufacturing safety are inadequate. This situation requires coordination of the activities of the health system, FVV, road safety services and labor safety authorities.

One of the positive aspects of the study is the possibility of a comprehensive review of their cause, demographic distribution and consequences, analyzing a wide range of cases. At the same time, there were some limitations: since the analysis was carried out only on the basis of existing documents, there may be no full details of certain cases; whereas epidemiological monitoring could have been perfect by covering a wider period.

Based on these results, the following recommendations were developed for forensic practice:

- Strengthening the regular monitoring system in cases of trauma;
- To strengthen the work of targeted propaganda on the Prevention of traumatism (especially among young people and drivers);
- Control of strict compliance with the safety standards of yth and manufacturing;
- Improving the qualifications of forensic experts and modernizing diagnostic technologies.

It is also recommended that, based on the results of this study, comparative analysis will be carried out at the regional level in the future, as well as research that will assess the consequences of traumatism from an economic and social point of view.

Conclusion

It was determined through the analysis of cases of forensic trauma that society has a high incidence of traumatic injuries, with road accidents, crime-related cases and accidents occurring in domestic conditions as their main causes. The group most affected in the study was men between the ages of 15-45, a factor that requires special attention for the health care system and law enforcement.

Also, the high incidence of trauma among rural residents indicates the need for security measures, transportation and the development of a culture of Labor. According to the results of the analysis, the trauma varies in severity, with some cases ending in death, further increasing the importance of the forensic examination service.

Based on the results of the study, the following conclusions were drawn:

- To reduce cases of traumatism, it is necessary to strengthen preventive and propaganda work;
- Mechanisms for regular monitoring of the causes, severity and consequences of traumatism should be introduced;
- It is necessary to equip the forensic medical examination with modern technologies and improve the skills of specialists.

In the future, it will be important to carry out research on traumatism on a wider scale, including in the cross section of territorial, age and professional groups, to develop practical preventive measures.

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