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NEW OPPORTUNITIES FOR DETERMINING THE NATURE, MECHANISM AND SEVERITY OF EYE INJURIES

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Eye injury severity assessment is carried out in accordance with the Criminal Code of the Republic of Uzbekistan [2]. Criteria for determining the severity of harm to health are specified in paragraph 9 of the decree No.153 issued by the Ministry of Health of the Republic of Uzbekistan on June 1, 2012, titled "Percentage of permanent loss of general work capacity due to various types of injuries, poisoning external factors, and other external causes" [3]. In daily forensic medical practice, three criteria are mainly considered: "the danger to life at the time of injury", "the duration of recovery from health impairment" and "the percentage of permanent or temporary loss of general work capacity" as indicated in the table based on the percentages of loss of work capacity due to injuries and external factors. The duration of the health impairment cannot objectively reflect the severity of harm to health since it is subjective [1, 6].

The percentage of permanent loss of work capacity is determined according to the table "Percentage of loss of work capacity due to injuries and external factors". When assessing the severity, regardless of the nature of the eye injury, the severity of eye injury is classified as mild, moderate-weight, and severe injuries. Mild injuries, according to the norm, do not affect vision function or cause cosmetic damage. Moderate injuries result in partial loss of vision function or mild cosmetic damage. Severe injuries result in significant impairment of vision function or permanent cosmetic damage. Injuries causing severe impairment of vision function or permanent cosmetic damage are classified separately. Severe injuries result in significant impairment of vision function or permanent cosmetic damage [4, 7, 8].

Eye injuries are classified according to types - those occurring in manufacturing, at home or in the countryside, in children, sports-related injuries, as well as those during military service. According to the literature studied, industrial and agricultural injuries, which were the main type of eye injuries during Soviet times, are now surpassed in frequency by domestic (including criminal) injuries. In the workplace, the unwanted injury caused by pricking into the eye is in the second place



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(25%), while contusions rank the third (13.2%). Only burn injuries maintain a leading position among injuries sustained in the workplace (47.9%).

From the data of the considered literature, it turned out that at the Mariinsky hospital Eye Hospital in St.Petersburg, summing up almost a decade of observations of patients with eye contusions, the distribution by type of injury is even more different: injuries received in production-1.8%, injuries in home conditions – 98.2% [5].

This analysis also demonstrates other trends in modern ophthalmic traumatology - a significant portion of injuries are incurred as a result of aggressive actions by other people (55.6%), as well as in the case of alcohol intoxication (45.3%).

In the case of eye injuries, in the second group of individuals, in 50% of cases, the determination of the severity of the injury is based on the "continuity of impairment of health" criterion, while in 24% of cases, it is determined by identifying the percentage of permanent loss of general work capacity. Both criteria have been developed, but the conclusion about the severity of the injury is given according to the dominant criterion - the degree of eye injury corresponds to the severity of impairment of health. In cases of eye trauma, where the injury is to the body of the eye (third research group), it is determined based on the criterion of permanent loss of general work capacity. In all cases, the volume of permanent loss of general work capacity is determined only by the ratio of "before and after the injury viewing acuity" (94% of the examined individuals showed a statistically significant decrease in viewing acuity compared to 1.0). The consequences of eye injuries, such as impairment of accommodative function, loss of half of the field of vision (hemianopsia), or distortion of the field of vision, are not used in the examination for determining the volume of permanent loss of general work capacity. The severity of eye injury is determined according to the "continuity of impairment of health" criterion in 76% of cases and only in 24% of cases, the expert opinion is based on the criterion of permanent loss of general work capacity. In the current and repeated forensic medical examinations, two cases have been identified where the forensic medical examination does not establish the severity of eye injury.

The analysis of the work material showed that the main reason for the inconsistency in forensic medical evaluation is the incorrect diagnosis of the nature of the eye injury based on its characteristics. If it is found that the diagnosis of eye injury has been incorrectly made according to its characteristics, and during the re-examination, the symptoms corresponded to a more severe form of impairment,



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these results were confirmed by instrumental examination results. Recent forensic medical examinations have revealed that the severity of injuries sustained by the eye, as observed on the body, is primarily determined based on neurological symptoms and the dynamics of post-injury events, without objective consideration. These findings are based solely on individual appeals for medical assistance sought after injury and are primarily associated with diseases and eye injuries that occur most frequently and rapidly. For example, the healing and maturation of the eyelid-eye complex take 20-30 days, and without sutures, it takes 15-20 days. However, it should be emphasized that these terms are only applicable to descriptive characteristics and are intended for healthcare providers who conduct examinations, not for forensic experts. Our analysis of forensic medical examination research based on medical records indicates that in 51 cases of overall eye damage, severe eye injuries account for 77.3%. In 9 cases, moderate eye injuries accounted for 13.7%, and in 5 cases, severe injuries accounted for 9%.

The comparative analysis and discussion of the findings obtained over the past five years, from 2016 to 2021, based on the forensic medical examination conducted at the Tashkent Branch of the Republican Scientific and Practical Center of Forensic Medical Examination, revealed that eye injuries are frequently recorded among male individuals. 80% of the cases observed in individuals aged 16 to 30. Among these, eye injuries consist of eye wounds (24.5%), contusions of the eyeball (42.5%), and injuries to the eye sockets (33%). Injuries to the eye sockets and contusions of the eyeball were noted in females. Upon analyzing the examinations conducted for various age groups, the following observations were made: In males, injuries to the eye are prevalent between the ages of 16 and 30, particularly among those actively engaged in labor. In females, injuries to the eye occur between the ages of 19 and 26, indicating that women are most vulnerable during this age range, being both active and susceptible to injuries. Eye injuries among women aged 40-45 are less frequently reported. In the general classification of eye injuries in females, injuries to the eye sockets dominate among those aged 19-30 and 30-40 who have undergone forensic medical examination.



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Summary:

1. In forensic medical examinations of eye injuries, besides medical records and expert observations, it is necessary to collect detailed information on the circumstances of the incident and anamnestic data.
2. Given the specificity of these forensic medical examinations, the completeness and informativeness of the medical information are crucial in evaluating eye injuries in forensic medical assessments.
3. When assessing the damage caused to health, the impact of the injury on visual acuity, and the severity of the injury in cases of eye injuries, re-examination and conclusions by an ophthalmologist are always necessary.

REFERENCES

1. Chen T., Gu S., Han W., Zhang Q. The CT characteristics of orbital blowout fractures and its medicolegal expertise // J Forensic Leg Med. 2009 Jan. Vol. 16 (1). P. 1-4.
2. Ganieva, N.Kh. & Baxriev, I.I. (2023). Prevalence, types, mechanisms and nature of orbital injuries. *Journal of new century innovations*, 32(1), 144-147.
3. Ganieva, N.Kh. & Baxriev, I.I. (2023). On the issue of expert assessment of the severity of harm to health in cases of orbital injuries. *Research Journal of Trauma and Disability Studies*, 2(6), 253-256.
4. Klevno, V. A. Effective tools for determining the severity of harm to human health. *Forensic Medical Examination*. 2009. No. 1. P. 3-5.
5. Lutsevich, E. E., Alkhumidi, K. Modern aspects of diagnosis and treatment of orbital fractures. *Bulletin of Ophthalmology*. 2013. No. 6. P. 89-95.
6. Orszagh M., Zentner J., Pollak S. Transorbital intracranial impalement injuries by wooden foreign bodies: clinical, radiological and forensic aspects // *Forensic Sci Int*. 2009 Dec 15. Vol. 193 (1-3). P. 47-55
7. Rocchi G., Fadda M. T., Marianetti T. M. et al. Craniofacial trauma in adolescents: incidence, etiology, and prevention // *J. Trauma*. 2007, Vol. 62, N 2, P. 404-409.
8. Sidebottom, A. J. The TN Chawla Lecture – The current management of midfacial trauma. *J Oral Biol Craniofac Res*. 2013; 3(3): 120-122. doi:10.1016/j.jobcr.2013.07.006.

