



## FORENSIC CRITERIA FOR DETERMINING THE TIME OF TRAUMATIC BRAIN INJURIES

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### Summary

The variety of morphological manifestations of traumatic brain injury (TBI), their different forensic significance determine the subsequent situations associated with the forensic examination of TBI, so it is advisable to determine a specific plan for the forensic medical examination of TBI.

**Key words:** traumatic brain injury, forensic medicine, stroke, fracture.

## СУДЕБНО-МЕДИЦИНСКИЕ КРИТЕРИИ ОПРЕДЕЛЕНИЯ ВРЕМЕНИ ЧЕРЕПНО-МОЗГОВЫХ ТРАВМ

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### Резюме

Разнообразие морфологических проявлений черепно-мозговых травм (ЧМТ), их различное судебно-медицинское значение обуславливают последующие ситуации, связанные с судебно-медицинской экспертизой ЧМТ, поэтому целесообразно определить конкретный план судебно-медицинской экспертизы ЧМТ.

**Ключевые слова:** черепно-мозговая травма, судебная медицина, инсульт, перелом.

## BOSH MIYA JAROXATLARINI VAQTINI ANIQLASHNING SUD- TIBBIY MEZONLARI

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### Annotatsiya

Bosh miya jarohatlarini (BMJ) morfologik ko'rinishlarining xilma-xilligi, ularning turli xil sud tibbiy ahamiyatga ega bo'lishi, BMJ bo'yicha sud-tibbiy baholash bilan





bog'liq bo'lgan qiyin vaziyatlarni keltirib chiqarmoqda, shuning uchun BMJ bo'yicha sud-tibbiy baholashning ma'lum bir rejasini belgilash maqsadga muvofiq.

**Kalit so'zlar:** bosh miya jarohatlari, sud tibbiyoti, lat yeyish, sinish.

## References

The problem of studying the mechanism of occurrence and pathology of severe traumatic brain injury (STBI) remains very relevant both for forensic doctors and for specialists in clinical medicine [D.V. Bogomolov, 2003]. STBI averages 35.6% of all injuries, and in the general structure of traumatic brain injury it is 42.8% [O.B. Dolgova, 2004]. The high frequency and high mortality in STBI determines the undoubted social and medical significance [Ryabov M.P., Krasnoyarov G.A., Tsybikov E.N. et al., 2005].

For forensic medical examination, the assessment of various aspects of mechanical damage to the head brain is of great practical and theoretical interest [Guseinov G.K., Fetisov V.A., Bogomolov D.V., 2010]. When describing thanatogenesis, it is necessary to take into account the establishment of the nature of the lesions, the clarification of the mechanism of their formation and the elucidation of the criteria for the lifetime of injuries [A.S. Masharipov, 2018].

In the forensic evaluation of brain injuries (BMJ), it is desirable to objectively and comprehensively examine all detected injuries and characterize them according to:

A. Identifying the group of vital injuries.

B. Differentiate between primary and secondary injuries.

V. Identification of the primary injury group to assess the contributing factor and injury mechanisms and characteristics

G. Determining the characteristics of the damaging factor (what the damaging factor is made of, the damaging surface, relief, size and shape).

D. Determine the mechanism, type, direction of brain injuries in sequence, together with the factors causing the injury and other influencing forces.

E. Identifying the characteristics of the causative factor and its mechanisms of action in multiple injuries.

J. Identify all identified injuries in as much detail as possible at the time of occurrence  
There should be objectivity in the criteria of forensic evaluation of any injuries, including brain injuries. Only then, investigative and judicial bodies can accept the conducted expertise as a source of evidence.





Based on the shape and size of the injuries, i.e., the surface of the injury-causing object is determined based on the shape and size of the injuries, such as lacerations, lacerations, wounds, butikal and hole-like fractures of the bones of the skull.

Relief is the surface of the object causing the injury in the wounds, its size, depth area in the exudate, its continuity with the exudate in the superficial wound, identification of the wound against the background of single contusions or against the background of wound cracks.

**Material** - the material of the object causing the injury is defined by the presence of foreign bodies connected to the object around the wound or at the bottom of the wound. These are identified by microscopic, various x-ray examinations and by different types of magnification, color printing method, spectrography and a number of other methods of examination.

Identification of a specific injury-causing object is usually studied through a comparative comparison of the injury and material evidence in the presented work materials with the injury caused, and experimental studies of these objects.

**Blunt body effect** - lat wound swelling, contusion, presence of jagged, botoidal, and mine burns, lat zones of bone fractures.

The place of impact of the force is the outer part of the wound, the shape of the skull, the shape of the bone, the shape of the hole, and therefore the appearance of linear fractures of the skull.

The impact of the injury-causing factor on the lat wound walls located in the head region (disruption of the tissue walls, compression and openness); the direction of the skull fracture, separation from the impact area, injury to the brain tissues and craniums and on the opposite side of the skull (Protivoudarnyx povrejdennii obolochek i brain tissue).

The type of traumatic effect is determined by the place of impact of the object causing the injury, the fracture character of the skull bones and the presence of multiple concussions of the brain, erosive injuries of the soft tissue of the brain and punctate subarachnoid deposit burns.

Number of injurious effects - The number of injurious effects is determined by comparing the specified type of effect with the number and relative location of the impact sites of this force.

The sequence of the injury-causing factor - In determining the sequence of traumatic effects, it is necessary to take into account the location of the burns or bone fractures, and perhaps the mortality of some injuries and the post-mortem state of other injuries, the formation of injuries at different times. Fracture lines (taking into account the variant of the anatomical structure of the skull), cross-location and size



of subarachnoid deposits and traumatic brain injuries are important along with erosion injuries.

We have presented the basic forensic criteria necessary to solve common forensic problems. The same principles should be used to ensure the correct formation of answers to other less common "non-standard" questions; The relevance, objectivity and completeness of the argumentation depends on the extent to which the above-mentioned criteria are applied in practice.

## Literature

1. Hwang O., & Ding, P. (2018). Evaluation of the severity of traumatic brain injuries in children during a forensic medical examination. Journal of problems of biology and medicine, (4 (104), 183–186. retrieved from [https://inlibrary.uz/index.php/problems\\_biology/article/view/2768](https://inlibrary.uz/index.php/problems_biology/article/view/2768)
2. Masharipov A.S. Forensic medical assessment of thanatogenesis in severe traumatic brain injury // Sib. honey. magazine (Irkutsk). 2018.№2. URL: <https://cyberleninka.ru/article/n/sudebno-meditsinskaya-otsenka-tanatogeneza-pri-tyazheloy-cherepno-mozgovoy-travme> (дата обращения: 10.10.2022).
3. Sadiev Erali Samiyevich, Namozov Farrux Jumayevich ENDOSCOPIC INTERVENTIONS AND OZONE THERAPY IN THE COMPLEX TREATMENT OF PATIENTS WITH MECHANICAL JAUNDICE AND CHOLANGITIS WITH CHOLEDOCHOLITHIASIS. ResearchJet Journal of Analysis and Inventions. 2021. 9(2),22-27
4. Sadiev Erali Samiyevich, Isroilov Rajabboy Israilovich ГЎДАКЛАР ТАСОДИФИЙ ЎЛИМИДА ЮРАК ЎТКАЗУВЧИ ЙЎЛЛАРИ ПАТОМОРФОЛОГИЯСИ. Central asian journal of medical and natural sciences. 2(5),152-156
5. Sadiev Erali Samiyevich PATHOMORPHOLOGY OF THE CARDIAC TRACT IN ACCIDENTAL MORTALITY OF INFANTS. WEB OF SCIENTIST:INTERNATIONAL SCIENTIFIC RESEARCH JOURNAL. Volume 2, Issue 10, Oct., 2021.64-70
6. Sadiev Erali Samiyevich, Jurayeva Gulbaxor Bakhshilloiyevna BRONCHOPULMONARY COMPLICATIONS AFTER HEART SURGERY WITH CONGENITAL DEFECTS. INTERNATIONAL JOURNAL FOR INNOVATIVE ENJINEERING AND MANAGEMENT REWSEARCH. Vol 10 Issue01, Jan2021.320-323





7. Sadiev Erali Samievich, Sanoyev Bakhtiyor Abdurasulovich HEART DISEASES IN FORENSIC MEDICAL PRACTICE: SUDDEN CARDIAC DEATH // World Bulletin of Public Health- Volume-8, March 2022. P. 76-79
8. Sadiev Erali Samievich, Sanoyev Bakhtiyor Abdurasulovich HEART DISEASES IN FORENSIC MEDICAL PRACTICE: SUDDEN CARDIAC DEATH// «Тиббиётда янги кун» 2 (40) 2022. P. 26-30.
9. Sadiev Erali Samievich, Sanoyev Bakhtiyor Abdurasulovich HEART PATHOLOGY IN THE PRACTICE OF FORENSIC MEDICAL AUTOPSY: CARDIOSCLEROSIS // «Тиббиётда янги кун» 2 (40) 2022. P. 31-34.
10. Sanoev B.A., Israilov R.I. and Djuraeva G.B. QUANTITATIVE INDICATORS AND METHODS FOR MODELING STRUCTURAL UNITS IN PLACENTAL INSUFFICIENCY // World Journal of Pharmaceutical Research. Volume: 09 Issue: 12 | 2020. 37-47 p
11. RI Israilov, BA Sanoev, AZ Olimova Pathologically Undifferentiated Placental Morphology in Primary Placental Insufficiency // American Journal of Medicine and Medical Sciences. Volume: 10 Issue: 09 | 2020. 660-663 p
12. Sanoev Bakhtiyor Abdurasulovich MORPHOLOGICAL AND MORPHOMETRIC CHARACTERISTICS OF THE PLACENTA IN NORMAL PREGNANCY.// DEVELOPMENT OF A MODERN EDUCATION SYSTEM AND CREATIVE IDEAS FOR IT, REPUBLICAN SCIENTIFIC-PRACTICAL ONLINE CONFERENCE ON "SUGGESTIONS AND SOLUTIONS" Issue: 06 | 2020. 94-96 p
13. БА Саноев, ТШ Ниёзова, НИ Хикматова МАКРО-И МИКРОСКОПИЧЕСКИЕ ПРОЯВЛЕНИЯ ЛЕЙОМИОМ МАТКИ // Новый день в медицине. Номер 2 . 2020. С. 526-528
14. Sanoyev Bakhtiyor Abdurasulovich, Olimova Aziza Zokirovna. Pathology of Precancerous Conditions of the Ovaries in Women of Reproductive Age. // Volume: 01 Issue: 06 | 2021.
15. Aziza Zokirovna Olimova, Sanoyev Bakhtiyor Abdurasulovich. OVARIAN DISEASES IN AGE OF REPRODUCTIVE WOMEN: DERMOID CYST. // Volume: 01 Issue: 06 | 2021. 154-161 p
16. Aziza Zokirovna Olimova, (2021, July). COMPARATIVE CHARACTERISTICS OF THE MORPHOLOGICAL PARAMETERS OF THE LIVER AT DIFFERENT PERIODS OF TRAUMATIC BRAIN INJURY. // In Euro-Asia Conferences (pp. 139-142).
17. Aziza Zokirovna Olimova. Частота Встречаемости Миомы Матки У Женщин В Репродуктивном Возрасте. // JOURNAL OF ADVANCED RESEARCH AND STABILITY (JARS). Volume: 01 Issue: 06 | 2021. 551-556 p





18. Aziza Zokirovna Olimova. РЕПРОДУКТИВ ЁШДАГИ ЭРКАКЛАРДА БЕПУШТЛИК САБАБЛАРИ: БУХОРО ТУМАНИ ЭПИДЕМИОЛОГИЯСИ. // SCIENTIFIC PROGRESS. 2021 й 499-502р
19. Aziza Zokirovna Olimova. MACRO- AND MICROSCOPIC STRUCTURE OF THE LIVER OF THREE MONTHLY WHITE RATS. // ACADEMIC RESEARCH IN EDUCATIONAL SCIENCES /2021 й. 309-312 р
20. Aziza Zokirovna Olimova. Cytological screening of cervical diseases: pap test research in the bukhara regional diagnostic center for the period 2015-2019 // Web of Scientist: International Scientific Research 3 (7), 2022, 121-128
21. OA Zokirovna Technique for cutting biopsy and surgical material in the practice of pathological anatomy and forensic medicine // Web of Scientist: International Scientific Research Journal 3 (7), 2022, 116-120.

