

ENHANCEMENT OF PATHOMORPHOLOGICAL CRITERIA IN FORENSIC MEDICAL ASSESSMENT OF BLUNT TRAUMA KIDNEY INJURIES, LITERATURE REVIEW

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Abstract.

Blunt trauma kidney injuries pose significant challenges in forensic medical evaluations due to their varied presentation and potential legal implications. This article delves into the refinement and enhancement of pathomorphological criteria used in the forensic medical assessment of kidney injuries caused by blunt objects. Through an in-depth analysis of relevant literature and case studies, this study aims to contribute to the development of standardized criteria for accurate and reliable forensic assessments.

Keywords: Blunt trauma, kidney injuries, forensic medical assessment, pathomorphological criteria, standardization.

TO'MTOQ NARSALAR SHIKASTLANGANDA BUYRAKLARDAGI PATOMORFOLOGIK O'ZGARISHLAR

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Annotatsiya.

Buyrakning to'mtoq shikastlanishi sud-tibbiyot ekspertizasi uchun uning namoyon bo'lishining xilma-xilligi va yuzaga kelishi mumkin bo'lgan huquqiy oqibatlari tufayli jiddiy muammo hisoblanadi. Maqolada to'mtoq narsalardan kelib chiqqan buyrak shikastlanishini sud-tibbiy baholashda qo'llaniladigan patomorfologik mezonlarni aniqlashtirish va takomillashtirish masalalari ko'rib chiqiladi. Tegishli adabiyotlar va amaliy tadqiqotlarni chuqur tahlil qilish orqali ushbu tadqiqot aniq va ishonchli sud-tibbiy baholash uchun standartlashtirilgan mezonlarni ishlab chiqishga hissa qo'shishga qaratilgan.

Kalit so'zlar: To'mtoq travma, buyrak shikastlanishi, sud ekspertizasi, patomorfologik mezonlar, standartlashtirish.

ПАТОМОРФОЛОГИЧЕСКИЕ ИЗМЕНЕНИЯ В ПОЧКАХ ПРИ ПОВРЕЖДЕНИЯХ ТУПЫМИ ПРЕДМЕТАМИ

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Аннотация.

Тупая травма почек представляет собой серьезную проблему для судебно-медицинской экспертизы из-за разнообразия ее проявлений и потенциальных юридических последствий. В статье рассматриваются вопросы уточнения и совершенствования патоморфологических критериев, используемых при судебно-медицинской оценке повреждений почек, вызванных тупыми предметами. Посредством углубленного анализа соответствующей литературы и тематических исследований данное исследование призвано внести вклад в разработку стандартизированных критериев для точных и надежных судебно-медицинских оценок.

Ключевые слова: тупая травма, повреждение почек, судебно-медицинская экспертиза, патоморфологические критерии, стандартизация.

Blunt trauma to the kidneys is a common occurrence in forensic medicine, often associated with accidents, assaults, or falls. Assessing the severity and nature of kidney injuries caused by blunt objects is crucial for determining the circumstances surrounding an incident and attributing responsibility. However, the lack of standardized pathomorphological criteria in forensic assessments can lead to inconsistencies and inaccuracies in injury evaluations. This study seeks to address this gap by proposing enhancements to existing criteria and promoting their uniform application in forensic practices [1]. It was found that in 52% of cases, in the presence of kidney damage, any external damage to theThere were no projections of the location of the organ. Conducted experimental studies on isolated organs and sectional observations with known circumstances of injury made it possible to determine that the nature of kidney damage reflects the main types of deformation that an organ experiences at the moment of injuries. Morphological features of damage in the zone of compression and stretching of the kidney parenchyma helps establish a specific mechanism of damage formation.

Literature Review: A comprehensive review of literature related to blunt trauma kidney injuries and forensic medical assessments reveals the diverse range of injuries that can occur, including contusions, lacerations, and hematomas. Existing pathomorphological criteria often focus on the extent of tissue damage, presence of hemorrhage, and structural integrity of the renal parenchyma. However, variations in terminology and classification systems across different forensic settings highlight the need for standardized criteria that account for the full spectrum of kidney injuries [2]. In the research part of the "Expert Opinion" it is necessary to describe all the damage to the skin and soft tissues of the lumbar region detected during external examination. When describing an injured kidney, the following should be indicated: a) the localization of each of the identified injuries relative to the anatomical formations of the organ: surfaces, poles, edges, relation to the gate; b) the orientation of the spine of each of the identified injuries; c) the nature of the damage: hemorrhage, capsule crack, rupture, detachment, fragmentation, crushing; d) shape damage, using generally accepted geometric terminology; e) size: length, width, depth; f) morphological properties of the lesion: the nature of the edges, ends, walls and bottom of the rupture; g) integrity of the kidney capsule (if the capsule is damaged, then the ratio of capsule rupture and parenchyma). It should be noted that when examining a kidney previously fixed in 10% neutral formalin, morphological signs characterizing compression and stretching zones are more clearly determined.

Methodology

This study employs a multi-disciplinary approach, combining insights from forensic pathology, radiology, and traumatology. Case studies of blunt trauma kidney injuries are analyzed, considering the injury mechanisms, anatomical locations, and associated complications [3]. Pathomorphological findings from autopsies and medical records are compared to identify common patterns and anomalies in injury presentations.

Research results

The results of this study indicate the importance of refining pathomorphological criteria to encompass subtle variations in kidney injuries caused by blunt trauma [4]. Key findings include the significance of distinguishing between cortical and medullary injuries, assessing the depth and extent of parenchymal disruption, and evaluating the presence of perirenal fat and capsule involvement. The discussion emphasizes the need for standardized terminology, classification systems, and imaging modalities to enhance the accuracy and reliability of forensic assessments [5].

Conclusion

In conclusion, this study advocates for the enhancement of pathomorphological criteria in the forensic medical assessment of blunt trauma kidney injuries. By establishing standardized criteria that account for the diverse manifestations of kidney injuries, forensic practitioners can improve the accuracy of injury evaluations, enhance legal proceedings, and contribute to better outcomes for forensic investigations. Continued research and collaboration among medical and legal professionals are essential for advancing forensic practices in the assessment of blunt trauma kidney injuries.

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