

**МІНІСТЕРСТВО ОХОРОНИ ЗДОРОВ'Я УКРАЇНИ
БУКОВИНСЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ**



МАТЕРІАЛИ

**106-ї підсумкової науково-практичної конференції
з міжнародною участю
професорсько-викладацького колективу
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Матеріали підсумкової 106-ї науково-практичної конференції з міжнародною участю професорсько-викладацького колективу Буковинського державного медичного університету (м. Чернівці, 03, 05, 10 лютого 2025 р.) – Чернівці: Медуніверситет, 2025. – 450 с. іл.

У збірнику представлені матеріали 106-ї науково-практичної конференції з міжнародною участю професорсько-викладацького колективу Буковинського державного медичного університету (м. Чернівці, 03, 05, 10 лютого 2025 р.) зі стилістикою та орфографією у авторській редакції. Публікації присвячені актуальним проблемам фундаментальної, теоретичної та клінічної медицини.

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channel, as well as between the mentioned gunshot characteristics and the diameter of the entry wound (with a value of 0.61, $p=0.02$).

Conclusions. The increase of the initial velocity of a bullet, its kinetic and specific energy affects in direct ratio the diameter increase of the entry wound and the exit wound channel, when fired from the CZ83 automatic loaded with 7.65×17mm browning. In addition, the capabilities of the modern three-dimensional modeling make it possible to create electronic archives of the main elements of gunshot wounds, to record their dimensions with 10-fold accuracy, and to conduct differential diagnosis between certain types of firearms cartridges.

Shylan K.V.

APPLICATION OF THE METHOD OF MUELLER-MATRIX TOMOGRAPHY OF TISSUES AND BLOOD FOR PRECISE DETERMINATION OF BLOOD LOSS DEGREE

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Introduction. Accurate determination of blood loss degree is very important for forensic medical experts, as it helps to objectively assess traumatic injuries, determine the circumstances of death, and contribute to justice in legal proceedings. Determining blood loss volume is especially important in cases of violent death, accidents, and in cases of massive blood loss due to disease. Modern methods often have limited accuracy, which can affect the objectivity of conclusions and lead to possible errors in judicial decisions. Therefore, it is urgent to develop more accurate technologies, such as the laser polarimetry method, to increase the reliability of forensic medical examinations, improve the quality of forensic conclusions, and contribute to a more objective determination of the causes and circumstances of death.

The aim of the study. Development of objective forensic criteria for digital differential Mueller-matrix tomographic diagnostics of the volume of acute blood loss.

Material and methods. Samples of biological tissues and blood were collected from 82 deceased people with various degrees of blood loss in the range from 0 mm³ to 3000 mm³. The study was conducted using the Mueller-matrix tomography method of biological tissues according to proposed algorithm.

Results. The obtained results of the tomographic reproduction of the coordinate distributions of the circular dichroism value illustrate the existence of differences between the coordinate distributions of values for histological sections of biological tissues of deceased people with different degrees of blood loss. Therefore, the change in the values of statistical moments for biological tissues at different values of blood loss is established: SM₁ varies from 0,096 to 0,024; SM₂ - from 0,21 to 0,057; SM₃ - from 0,48 to 2,04; SM₄ - from 0,23 to 2,84.

Conclusions. For all studied biological samples, the method of differential Mueller-matrix tomography of the circular dichroism of the polycrystalline component demonstrates sensitivity to changes in the volume of blood loss in the range of 0 mm³ - 2500 mm³. The accuracy of this method ranges from 86% to 92%, which ensures high reliability in the analysis of biological tissues of deceased people with varying degrees of blood loss.

Yasinskyi M.M.

COMPREHENSIVE APPROACH TO THE REHABILITATION OF PATIENTS WITH TEMPOROMANDIBULAR JOINT DYSFUNCTION COMPLICATED BY PERIODONTITIS

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Intoduction. The co-occurrence of temporomandibular joint disorders (TMD) and periodontal disease complicates the clinical picture, making it difficult to isolate each condition as a distinct nosological form. Only through a comprehensive set of diagnostic evaluations can the clinical manifestations be accurately refined, enabling the development of preventive and therapeutic algorithms aimed at patient recovery. Timely diagnosis and rational treatment of