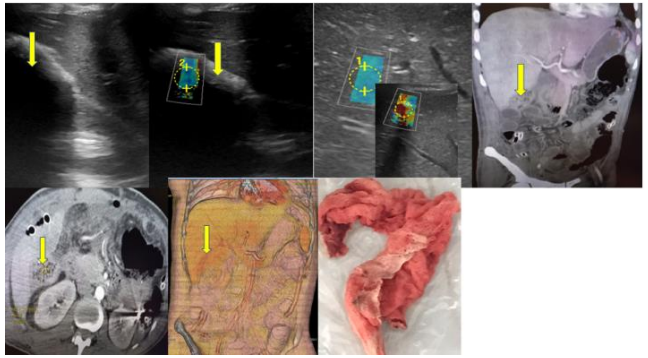
MSSP576: MULTIFACETED ANALYSIS IN COMBAT TRAUMA PATIENTS IN MODERN WARFARE

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Objective: To investigate and conduct clinical-epidemiological, organizational-diagnostic, ballistic, and statistical analyses in groups of combat trauma (CT) patients in modern warfare.

Materials and Methods: The results of clinical-epidemiological, organizational-diagnostic, and ballistic analyses in comparison groups, namely the control group (n=326 (90.3%) - survivors; n=35 (9.7%) - deceased) and the main group (n=583 (89.3%) - survivors; n=70 (10.7%) - deceased), were evaluated to identify the relationship between the risk of a lethal outcome and the type of combat trauma (firearm/non-firearm injury). The medical-statistical analysis was conducted using the STATISTICA software package, and the analysis results were transferred to the corresponding EXCEL spreadsheet.

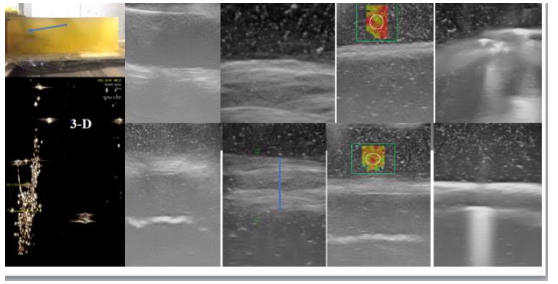


Diagnostic example of an infectious complication. MDCT with contrast (hemostatic material) of the subhepatic space that caused sepsis. Foreign body does not accumulate contrast medium, density 62 IU. HU

Research Results: Examining the impact of the type of CT (non-firearm/firearm injury), gender of the injured, combat experience, use of personal protective equipment (protective helmets, body armor, etc.), and sanitary losses on the risk of a lethal outcome in patients with non-firearm injuries, firearm injuries (FI), explosive injuries (EI), and explosive trauma (ET) revealed the following:
The analysis groups did not differ in terms of gender, combat experience, and the risk of sanitary losses (p=0.780, p=0.265, and p=0.667, respectively).
A difference was observed between the groups (p<0.001) based on the type of CT; in the main group, a shift in the distribution towards EI (26.0%) and ET (36.9%) was observed compared to the control group - FI (16.1%) and ET (22.4%).
The use of personal protective equipment (PPE) was more frequent in the main group (84.7%) compared to the control group (70.1%) (the difference is statistically significant, p<0.001).
Factorial features related to the risk of a lethal outcome were identified in the control group - non-firearm trauma (15.9%) and explosive injury (13.8%) (p=0.036); no association with the type of CT was found in the main group (p=0.036).

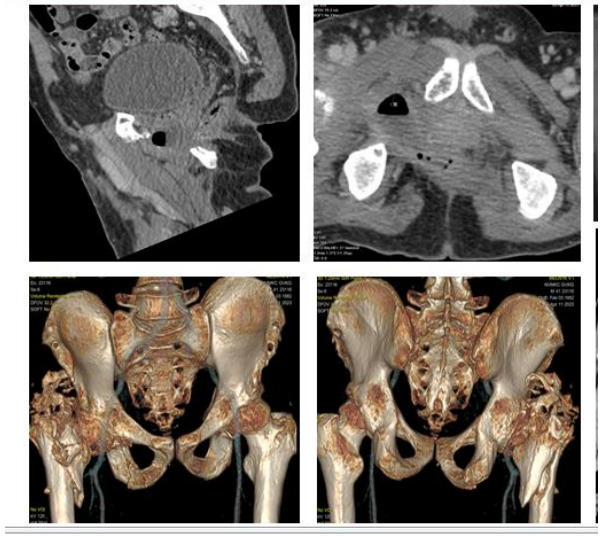


MODELING The CT study experimentally determined the radiological density of a live bullet during programmed shots from small arms (5.45 and 7.62 bullets) into a combined biological simulator



Wound channels during the shooting of a trophy Russian AK-12 rifle with a live 5.45x39 mm bullet, tungsten carbide composition, were experimentally examined. CT reconstruction of the wound channel. Multiple fragments and a dissected wound channel. Sonoelastometry of shelled gelatin blocks

Diagnostic examples of complications of combat trauma. Tomograms of blast injuries. Osteomyelitis of the pelvis and lower extremities. Pelvic abscess. Explosion injury. Wound of the chest and abdomen. Pneumothorax. Abdominal abscess.



Staff sergeant M., 37 years old. Combined combatant wound to the head. SURGICAL TREATMENT. Bilateral thoracentesis, drainage of both pleural cavities by Bühlau, laparotomy, diaphragm suturing, splenectomy, suturing of the damaged stomach, drainage of the abdominal cavity, laparostomy with 4 gauze napkins and one diaper left in the abdominal cavity.



Conclusions: To prevent lethal outcomes and achieve effective treatment of CT in patients with firearm and non-firearm injuries, it is necessary to consider the combat history of the injured (combat experience, use of PPE, circumstances of CT occurrence, use of firearms by the opponent for firearm injuries, etc.) and, in the future, pay attention to the search for effective methods of medical imagine of CT.