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CADAVER EXAMINATION AT THE DEATH SCENE

Abstract. The on-site investigation ensures the direct perception of the ambiance of the crime scene, even if its commission was not accompanied by material changes, or although accompanied by such transformations, they were the subject of direct findings in the early stages of the criminal process.

Keywords: examination, crime scene, forensic medicine.

Introduction. Forensic medicine can be seen as a bridge between legal and medical argumentation. Through its specific activities, forensic medicine establishes a link between the rigorous system represented by the legal system and a biological reality that cannot be quantified in accordance with precise and generally accepted norms. Of particular importance in this sense is the high-quality implementation of the investigation at the crime scene, an activity in the course of which a large amount of reliable forensic information is discovered and collected, which serves as the basis for the investigation of the vast majority of criminal cases. The place where the wrongful act was committed is in fact the richest place, which contains a lot of data about the criminal act and also reveals the elements concerning the perpetrator. Recent technological developments are creating new opportunities to conduct sound scientific measurements and studies outside the controlled laboratory environment. The benefits of real-time forensic investigations on the ground are multiple, and such technology has the potential to greatly increase the speed and effectiveness of the criminal justice system. However, such benefits are realized only when the quality
can be guaranteed at any time and the findings can be used as forensic evidence in court. Not in vain is the on-site research symbolically called "the key to solving the problem with several strangers"[2]. The progress of science worldwide has created the opportunity to develop interdisciplinary sciences, which have brought significant benefits to special methods and techniques for investigating criminal cases. From the classical methods, which are true that they are still found in the judicial activity of criminal prosecution bodies and specialists in the fields that help to conduct the criminal process, we have come to formulate theories and apply new methods in the technique of investigating criminal acts, which have "revolutionized" the field of criminal sciences. As technology infiltrates every aspect of our lives, it's no wonder that crime solving has become almost futuristic in its advances. From retinal scanning to traces of chemistry, real forensic technologies are so advanced at helping solve crimes that they seem to be something of a science fiction thriller. Technology can be seen as a vital catalyst in the transition of scientific findings and innovation prospects. The added value of science materializes through technology that allows society to take full advantage of new discoveries. Such benefits are very diverse (eg health, economy, trade, transport, communication, sustainability, cultural heritage conservation, safety, security and justice), but they have in common that they increase the quality of life and provide progress and prosperity in societies (assuming that these benefits outweigh the potential misuses and threats that are also associated with new scientific findings). The cycle of science, innovation and growth is the rationale behind the very substantial and structural investment of developed countries in science programs [3].

Purpose of the study:

1. Estimate the requirements and specifics of the investigation of cadavers at the scene.
2. Estimate the factors influencing the research process.
3. Evaluate new methods and procedures developed for examining corpses at the scene.
4. Develop a problem-solving strategy and obstacles to finding corpses in place.
Identification - the considered special measure can be carried out publicly, encrypted and secretly, depending on the information received about the object of identification, tactical procedures and methods used. Identification of a person by footprints is used if they are present at the crime scene, with an effective component of about 15%. Fingerprint identification with an effective ratio of 60%. Identifying a person by photo or video, with an effective component 35%. Identification of a person by handwriting (identification of a writer), efficiency about 20%. Odontological identification is based on the detection of olfactory traces, the efficiency of which is 50%. Identification by electronic information method. Microbiological identification, 65%. Biometric human recognition system based on the characteristics of the iris of the eye, with an efficiency of 85%. Tactics for identifying and using genetic evidence at the crime scene, with an effective component of 88%. Ballistic innovations, namely the "double casting" technology, is based on the implementation of the principle of free exchange of ballistic information between different states of the world, thereby ensuring the effective interaction of existing systems. This technique helps the investigation by 78%.

Viropsy, despite the high costs, can be partially compensated by the possibility of examining a large number of corpses in a short time and with fewer personnel, thanks to visualization of the cause of death, the possibility of 2D, 3D reconstruction, Most Effective Method - 90%. Forensic medical examination and aerial operational surveillance using modern means of flight, such as drones with an effective component of about 80%.

Contemporary forensic institutes operate state-of-the-art laboratories where samples are studied with modern instruments. Without this often high-tech and expensive equipment, the forensic expert would not be able to generate forensic findings that are so often vital to solving a crime and ensuring high-quality decisions in the court. The profiling of contemporary forensic DNA STR is the most obvious and striking example of such a fusion of scientific discoveries, technological advances and forensic application and interpretation.

The activity of forensic institutions has always been in close accordance with law enforcement and judicial structures, technical and scientific progress has had a
significant impact on all spheres, making the process of identifying and capturing the criminal faster and more truthful. These technologies can help investigators search for missing persons, cases of sexual violence and homicides. At the same time, there may be a potential danger of reporting personal data that may create controversy in the use of these technologies, but the enormous benefits they possess and their potential evolution would create premises for a future new research and identification system [4].

Results:

1. We live in a world with dynamically changing effects, such as human activity, meteorological aspects and traffic vehicles and, most importantly, from a forensic point of view, different types of crime. The investigation of the crime scene is a multi-faceted exercise that involves not only the collection of tracking evidence, but also the recording and documentation of the scene, the reconstruction of the scene, etc. In addition to this assessment, it is also necessary to assess the safety of the scene which is vital in some cases. Photographic documentation of crime scenes is the cornerstone of any criminal investigation. During the crime scene investigation, the investigator faces many difficulties due to the complicated nature of the crime scene. In some cases, the particular nature of the crime scene makes it a difficult task to properly examine. For example, the geographical location of the scene, such as the banks of rivers, the edges of rocks, high-rise buildings, make it an extremely difficult exercise [5].

U.A.V. equipment, also known as drones, are unmanned aerial vehicles, guided from the ground by radio remote controls or even by G.P.S. (Global Positioning System). These drones can be divided into several categories, depending on the utility for which they were built. There are military drones used by the armed forces, especially for air surveillance and intelligence gathering missions, they are equipped with high resolution video cameras, the images captured by them can be viewed from the ground in real time.

The use of UAVs can minimize scene contamination and can also map and examine the particular scene before visiting it. Therefore, determining the extent of the scene and determining the point of entry and exit to the stage can be decided
even before reaching the stage. As this is not possible in conventional examination methods, it will be very advantageous and useful in the appropriate scenario management. Viewing images captured by the camcorder can also be done with the help of special glasses equipped with a radio reception system. These civilian drones can find their utility also in the technical-scientific investigation of the crime scene by taking aerial photographs that capture the crime scene over a wide area (for example, in case of serious road and rail accidents, explosions, plane crashes, of large fires, etc.). In the case of deflagrations caused by terrorist acts or hijacking of aircraft, the capture of aerial images of the criminal field is all the more important as it provides an overview and detail of the existing traces on the spot.

The use of civilian drones to capture aerial images is a cheap means compared to other aircraft. They also do not pollute, thanks to the electric motors they are equipped with. The reliability of these flight equipment, the size, the low cost of acquisition and the ease of maneuverability are just a few advantages in using these drones as a permanent ally in intelligence gathering and aerial surveillance missions of police structures.

UAVs could also be used in emergency response situations, such as tracking down and searching for a missing person. Various other types of disaster responses, such as fire site control, disaster response, and explosive disposal, could be effectively managed through the use of UAVs. A UAV is a resourceful tool in crime scene investigation and management. We should also consider moving towards this technology, as it holds the future of crime scene investigation [6].

2. From the perspective of a forensic scientist, every nucleated cell in an individual's body contains DNA and is a potential source of genetic identification. The chemical structure of DNA encompasses the genetic code and is manifested by expressing the different characters of each person: sex, height, hair color, eyes, etc. Nucleic acids are molecules that store, transport, and manipulate information in any living cell. The code for writing this information is universally valid, and the biochemical mechanisms involved are on the one hand complex and on the other hand very exactly. The most widely used technique of forensic genetic analysis is
known as "Short Tanden Repeat" - the genotyping of short repetitive fragments a number of times, located in non-informational areas of the genome. Thus, DNA is extracted from each human biological trace containing nucleated cells to be subjected to an amplification reaction - "Polymerase Chain Reaction" - an enzymatic process by which the regions are replicated (multiplied) 28 - 34 times, generating - se approx. one billion (109) children. This technique highlights the number of repetitions of the basic units and transforms them into alphanumerical values, known as genetic profiles. Biological samples consisting of nucleated cells are essential for determining the genetic profile [7].

While Police strategies seek to maximize the contribution of science and technology to crime detection and investigation by making more and better use of forensic science, reducing attrition, increasing the number of offences brought to justice, ensuring public confidence etc. they do not specifically address or define a collective vision for the future use and potential impact of forensic science. For example, the greater in-force provision will result in a de-facto increase in the number of forensic science providers raising possible issues such as how to maintain consistency across a much wider provider base. In the short term it may be difficult to get an agreed forensic requirement regarding what the balance between forensic science users and providers and what the in-house capability should be, which may hamper efforts at improving performance, maximizing the use of technology and further commercialization [8].

Conclusion: In the technologically enabled and information rich environment of the 21st century there are many opportunities to reduce attrition from crime scene to court, maximize the number of offenders brought to justice and to assure public confidence however, in doing so the balance between privacy and security is increasingly difficult to manage. The advantages of the proposed elaborations consist in bringing the normative regulations, of the technical-forensic assistance framework of the research on the spot to the accredited daily practice and rhythm, to the contemporary tendencies and exigencies in a computerized society, springing from the positive experience in the forensic field.
References:


