

POSTER PRESENTATIONS

DEVELOPMENT OF THE AUTOPSY RATE IN SLOVAK REPUBLIC

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Introduction: The role of autopsy in the system of quality assessment in health care and in establishing the cause of death in the so called non-treated population and in cases of violent deaths is irreplaceable. Over the last decades of the 20th century and the first decade of the 21st century, we have been witnessing a decreasing autopsy rate at global, European and national levels. The objective of this paper is to explain a recent development and current situation of autopsy rate in Slovak Republic.

Material and methods: An analysis was performed of the development of the autopsy rate in the years 1995 - 2011. The statistical data for the purpose of the analysis were acquired from the Statistical Office (SO) and the Health Care Surveillance Authority (HCSA). **Results:** The autopsy rate decreased in the years 1995-2004 from 18.3% to 12.5% (SO). In the years 2005-2011, according to SO it ranged from 16.5% to 12.5%. According to the data from the HCSA, the autopsy rate in the above-mentioned period ranged from 18.1% to 14.2%. The number of medico-legal autopsies in absolute numbers decreased from 4,438 to 4,077. In comparison with the numbers of pathologic-anatomical autopsies, there was a relative increase of the rate of medico-legal autopsies. The number of autopsies associated with expert opinion formulation slightly decreased. **Conclusion:** Detailed studies of the autopsy rate show an increased number of diagnostic discrepancies with a decreased autopsy rate. In spite of the fact that in Slovak Republic there has been established a new institution that centrally manages performing autopsies, the current situation in this field shows that a decreasing tendency of autopsy rates is progressive and permanent also in the Slovakia region. **Key words:** autopsy – autopsy rate – pathology – forensic medicine – Health Care Surveillance Authority

EPIDEMIOLOGY OF MORTALITY IN THE HOMELESS UNCLAIMED POPULATION: A RETROSPECTIVE RESEARCH

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Introduction: India is one of the fastest growing economies in the world today, but it is seen worldwide that where there is rapid growth, there are people in abject penury being left behind homeless in the streets. Homelessness significantly impairs physical health and increases mortality. Data from the National Crime Records Bureau of India reveals that 2,22,446 bodies were declared unidentified in the past six years, i.e. 102 persons are dying unidentified every day in India. The aim of this study is to estimate the number and magnitude, demographic characteristics, the causes and manner of death in the homeless unidentified population. **Material and Method:** This is a 5-year retrospective study (from January 1, 2006 to December 31, 2010) based on the autopsy records of the Department of Forensic Medicine and Toxicology, Lady Hardinge Medical College, New Delhi. Almost all deaths among the homeless people were regarded suspicious and they were registered as medico-legal cases. **Results:** During the study period, a total of 2773 autopsies were conducted in the morgue of Lady Hardinge Medical College, New Delhi. Out of the total number of autopsies, 749 post-mortem examinations were performed in unidentified homeless persons. The highest number of 280 (37.38%) deaths was reported

in the year 2010. The homeless decedents showed a predominance of males, i.e. 676 (90.25%) cases. The majority of deaths occurred in the age group of 41–50 years (n=205 cases, 27.3%). Natural events constituted the cause of death in 536 (71.56%) cases and in the remaining 150 (28.43%) cases, the cause of death was related to an unnatural event. The cause of the majority of natural deaths in 387 (72.20%) cases was pneumonitis, followed by pulmonary tuberculosis in 122 (22.76%) cases. In cases of death resulting from unnatural events, the highest number of cases (n=91, 42.72%) were victims of road traffic accidents, followed by 63 cases (29.57%) of suspected poisoning. The highest number of deaths (61.54%) was reported between July and November. Out of the total 749 deaths, 700 (93.45%) victims were pronounced dead on arrival and only 49 (6.54%) individuals died in the course of treatment, having been admitted to hospital. **Conclusion:** The homeless people are vulnerable to exposure to natural cold, alcohol, drug abuse, violence, respiratory infections, etc. In view of the absence of public health surveys and epidemiological studies and lack of concern of health providers, we cannot assume the magnitude of their mortality. A large proportion of these deaths are preventable and public health interventions can save the life of the homeless population.

CHARACTERISTICS OF FATAL ROAD TRAFFIC ACCIDENTS IN BANJA LUKA REGION

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Introduction: Road traffic injuries are a large global public health and social problem. Every year, more than 1.2 million people are killed in road traffic accidents worldwide. Understanding the significance of that problem in a given local area is necessary for development of effective preventive measures.

Material and method: In this retrospective study, the authors used data from 186 post-mortem examination records of road traffic accident victims autopsied at the Department of Forensic Medicine in Banja Luka in the period of 2010-2012. Blood samples for alcohol analysis were forwarded to the Forensic Unit, Ministry of Internal Affairs of Republic of Srpska, where they were analyzed by gas chromatography (Thermo Scientific, Focus GC). **Results:** Out of 186 road traffic accident victims autopsied, 160 (86%) were male and 26 (14%) were female. The two most numerous age groups were 20-29 years and over 60 years of life. Overall, the most common cause of death was head injury (45.7%). Drivers (32.3%) and pedestrians (28%) were the leading groups of fatally injured, with head injuries constituting the most frequent cause of death. The prevalent injuries of the drivers involved the thorax (83.3%), followed by the head (63.3%), abdomen (60%) and lower extremities (36.7%). The most commonly injured body regions among the pedestrians were the head (86.5%) and thorax (84.6%), followed by the lower extremities (52%), spine (48%), etc. In this study, in 55.4% of the drivers and 56.4% of the pedestrians, determinations disclosed legally impermissible blood alcohol concentration levels (over 0.3‰). **Discussion and Conclusions:** There was a predominance of male victims, particularly among the drivers. Of the 60 drivers killed, 58 were male. Head trauma was the most common cause of death. The majority of individuals at risks were drivers and pedestrians, predominantly suffering from head and chest injuries. Injuries of the head, spine, pelvic and lower extremities were more frequent in the pedestrians. Abdomen injuries were more common in the drivers. More than one-half of the drivers and pedestrians were under impermissible influence of alcohol at the time of accident. The results of this study are mostly in accordance with international literature, possibly except the excessive predominance of male victims.

Key words: Road traffic victims, autopsy, cause of death, body region injuries

21TH CENTURY METHODS APPLIED TO THE RECONSTRUCTION OF A 19TH CENTURY CRIME SCENE

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Introduction: Count Teleki Laszlo (1811-1861), a prominent politician and academic, was found dead in circumstances indicating suicide in his study-room on May 8, 1861. Count Teleki was one of the leading figures of the Hungarian independence movement during the revolution of 1848-49 and in the subsequent years. He died on the eve of an important speech concerning Hungarian independence he was supposed to give as a response to the king of Hungary of that time, Habsburg Franz Joseph I. The aim of the poster presentation is to reconstruct the crime scene with the help of original documents and 3D laser imaging, which has allowed for re-examining this historically significant and controversial death case. **Materials and methods:** Research and finding the relevant materials: One could gain relevant information on the above death case thanks to the fact that some fragments of photographs and documents of that time have been stored in archives and museums and preserved till now. A five-member team examined those historical documents generously provided by the Hungarian National Museum, which included the records of the crime scene investigation, photographs, the autopsy report, and also the report of chemical and ballistic experts. The level of forensic and ballistic knowledge of that age was taken into consideration in the course of the analysis of documents. **Results:** The starting point of our investigation was that – for the very first time in the Hungarian history of crime scene investigation and forensic science – stereo photographs were made at the crime scene in question. This extraordinary historical document allowed for producing a 3D reconstruction of the crime scene. At that time, the autopsy was conducted by Dr. Ferenc Flor, Chief Coroner of the City of Pest. The post-mortem examination revealed that the cause of death was a hemorrhagic shock resulting from a single shot to the chest. The autopsy also concluded the heart was beating when hit by the bullet. The bullet entered the body on its left side between the 5th and 6th ribs. This was in line with a supposed self-induced injury using a front-loading gun found next to the body. **Discussion and conclusion:** The 3D rendering of the crime scene revealed the position of the body and other objects in the room. The post-mortem examination made it clear that a single shot was fired at a close range, at an unusual angle of 45 degrees, from the upper-left side. This was not considered to be a typical angle for a self-induced gunshot injury, but could not be excluded either. No other injury was found on the body. The ballistic expert concluded that the shot was fired from that particular weapon found next to the body. Using the 3D method helped us in modeling the motion and situation of the human body in space; in consequence, we could reconstruct more precisely what had happened 150 years ago.

WHY IS IT STILL DIFFICULT TO DIAGNOSE DROWNING?

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According to the WHO statistics, drowning is the third most frequent accidental cause of death following traffic accidents and falls.

The aim of our study was to overview the demographic facts and diagnostic paths in 65 cases where the cause of death was considered drowning in Csongrád County, Hungary, in the years of 2007-2011.

Demographic data, police reports, pathological, and laboratory results were evaluated, the drowning index was calculated.

The descriptive statistical analysis of demographic data revealed that the number of male victims were double that of females, and nearly one-half of the deaths occurred in the age group of 41-60 years, while there was only one case under the age of five.

The main risk factors identified among men were high risk behaviors, being under the influence of alcohol and participation in water sports and leisure activities. Sixteen deaths were regarded as suicidal, one as a suspected homicide, two were ascribed to natural diseases, and the rest (46) were considered as accidental. Nearly one-half of the accidental victims were under the influence of alcohol.

There were no cases where all of the classical pathological signs of drowning could be seen at autopsy, while in five cases, none of the signs of asphyxia were described. The diatom tests were positive only in one-third of the corpses, though in the remaining cases, the absence of water samples originating from the immersion site interfered with the test.

We have concluded that calculating the drowning index is not a useful tool and the diatom test should be used as an indicative aid of drowning.

LETHAL INJURY WITH PARTIAL EVISCERATION DUE TO A DOG ATTACK

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Genital and anal injuries caused by canines are very rare and occur typically as a result of an animal attack or of zoophylia. We present an unusual case of an 88-year-old female who suffered an anal bite injury caused by her dog in her home and died shortly after having arrived to the local hospital. The forensic autopsy revealed one large perineal tissue defect surrounded by typical teeth marks, absence of other relevant external injuries, intact internal genitalia, destruction of the anus, rectum and sigmoid colon, partial destruction of the small intestine, massive bleeding in the surrounding tissues, as well as purulent bronchitis, pneumonia and arteriosclerosis. The authors review the literature and analyze the case of this strange animal behavior.

BIOCHEMICAL ANALYSIS OF METABOLIC MARKERS IN AUTOPSY

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Introduction: Poorly maintained or undiagnosed diabetes may cause severe metabolic disturbances, such as diabetic ketoacidosis (DKA) and hyperglycemic coma. Another significant cause of ketoacidosis is alcohol abuse, which causes alcoholic ketoacidosis (AKA). These conditions can turn out to be lethal when untreated. Diagnosing them as a cause of death in autopsy is not always possible based on macroscopic, microscopic and toxicological findings. A biochemical analysis of metabolic markers, such as glucose, lactate, ketone bodies and glycated hemoglobin (HbA1c) provides essential information in such cases. **Materials and methods:** Data from forensic autopsies performed in Finland were evaluated and six exemplary cases where the results reflected metabolic disturbances are presented and the results discussed. Biochemical analyses of samples from forensic autopsies were performed in the Laboratory of Forensic Biology (Department of Forensic Medicine, Hjelt Institute, University of Helsinki). Glucose, lactate and ketone bodies were measured in the vitreous humor and HbA1c was measured in EDTA-blood samples. **Results:** Representative cases of DKA, AKA and hyperglycemia were chosen based on the level of metabolic markers. In DKA cases, ketone bodies, Traub value and/or glucose level, as well as

HbA1c level were clearly elevated. In AKA cases, Traub value might be slightly elevated, but glucose and HbA1c levels were within the reference limits and ketone body level was elevated. In hyperglycemic cases, Traub value and/or glucose levels were elevated, but ketone body levels were within the reference limits. HbA1c levels were often elevated, unless hyperglycemia was very recent or the episodes were less than 12 hrs at a time. **Discussion and conclusions:** Elevated glucose and elevated sum of glucose and lactate levels, the so called Traub value, indicated hyperglycemia. Nevertheless, due to postmortem glycolysis, glucose values under the reference limit cannot be used to exclude hyperglycemia. Elevated ketone bodies are a sign of ketosis or ketoacidosis. HbA1c is a reliable marker of average antemortem glucose levels in the preceding 1-2 months. It is important in distinguishing if the cause of ketoacidosis is diabetes or alcohol. Due to postmortem changes in a sample matrix, it is important to have an appropriate method for analysis. A combination of metabolic markers, such as glucose, lactate, ketone bodies and HbA1c provides the forensic pathologist with significant information in support of the diagnosis of the cause of death.

SEVERITY OF MORPHINE INTOXICATION

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Case records of 198 inpatients treated in the intensive care units of Moscow city hospitals for acute parenteral opiate intoxication were studied. The mean age of the patients was 24.5 years (16-56 years); most of them were males (83.8%; 166/198). There were 35 (17.7%) females. By taking into account the high ability of heroin to cause physical dependence that develops on the average within 1.5-3 months of its intravenous injection, it can be stated that most of the examinees were chronic drug addicts. Blood toxicological studies of the inpatients (n = 198) for acute poisoning detected morphine (1.5 µg/ml (0.1-4.1 µg/ml)) in all the cases (100%). Forensic chemical studies of blood, urine, and viscera from those who had died from intoxication (n = 55) within the first 48 hours after admission revealed morphine only in the urine (4.4 µg/ml (0.06-12.0 µg/ml)) just in 58.2% of cases (32/55); in the remaining cases (41.8% of the 55 victims), toxicologically important substances were not revealed in all study media. The critical blood morphine concentration (LD50) is 0.98 µg/ml in females and about 1.2 times less (0.78 µg/ml) in males. The mean blood morphine level was 0.6 µg/ml (0.1-3.4 µg/ml) in victims below 25 years of age (n = 117) and 1.15 µg/ml (0.1-3.9 µg/ml) in those aged above 25 years (n = 81). Thus, the presented information may be used to make an approximate estimate of the risk of death within all possible blood morphine concentrations, by taking into account gender, age, and opiate tolerance. The foregoing suggests the necessity of performing a critical appraisal of the positive results of a forensic chemical study as evidence for fatal opiate intoxication, particularly due to the absence of unambiguous morphological equivalents of this pathology, and to the ambiguity of toxicological parameters in acute and fatal poisonings.

EVALUATION OF ROUTINE DNA TYPING OF FINGERNAILS CLIPPINGS AND SWABS

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Physical contact between two or more people can result in a transfer of DNA from one person to another and biological material can accumulate under the fingernails hyponychium. Debris under the nails is anatomically protected against contamination from exogenous material. This is one of the reasons why the detection of an additional DNA profile in this site can be of a great value in the reconstruction

of a violent case. DNA extracted from fingernail swabs of victims (as well as perpetrators) in forensic cases is a possible source of DNA from the perpetrator in cases where victims struggled or defended themselves. The source of this DNA under victim's fingernails could possibly originate from a contact with the perpetrator's blood, saliva, semen or scratched skin. In this study, we have evaluated the relevance of routine DNA typing of fingernails clippings and swabs processed at the Department of Forensic Biology and DNA Analysis of the Institute of Forensic Science in 2011. The results are in concordance with outcomes of the previously published studies.

SEQUENCING DATA FOR HV1 AND HV2 MTDNA REGIONS IN MOTHER-CHILD SAMPLES

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Introduction: MtDNA analysis is relevant for forensic identity testing, as well as for human evolution studies. Due to maternal inheritance, lack of recombination, a high number of copies per cell, a high mutation rate and high polymorphic density, the mtDNA hypervariable regions HV1 and HV2 are well suited for forensic identification using a maternal relative as a reference sample. **Materials and methods:** In order to determine the frequency and the type of mutation between two generations, we investigated uniparental mtDNA inheritance in 50 mother-child pairs through the analysis of the HV1 and HV2 sequences. **Results:** Preliminary results show that most maternal relatives share identical mtDNA sequences and the neomutation rate seems to be very low from one generation to another. These data confirm the importance and the utility of mtDNA, allowing for a comparison of family members who share a common matrilinear ancestry and providing the basis for identification and maternal relationship both in biological evidence and in living individuals.

THE GENE EXPRESSION CHANGES AFTER CHRONIC ALCOHOL TREATMENT IN MOUSE SKELETAL MUSCLE WITH WHOLE TRANSCRIPTOME SHOTGUN SEQUENCING

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Introduction: Alcohol is one of the most widely used drug substances in the world. Repeated administration of alcohol causes various physical or mental disturbances. There are many reports concerning skeletal muscle impairment related to alcohol, such as striated muscle dissolution and muscle atrophy. Although the mechanism of the relation between alcohol and the muscular diseases has not been cleared yet, it is suspected that repeated administration of alcohol might change some genes in the skeletal muscle. In this study, we investigated the transcriptome in the skeletal muscle after the repeated alcohol administration in mice. **Materials and methods:** Mice were treated with 3.5 g/kg ethanol (n=2), and saline as the controls (n=2), four times daily for a week. The iliopsoas muscle was collected at 8 hours after the final injection, and total RNA was extracted and mRNA was purified. We used Miseq (Illumina) to investigate all RNA sequences according to the manufacturer's instruction. The obtained reads were mapped to reference RNA sequence using Bowtie software, and differential expression was assessed using DESeq which was an R package. **Results and discussion:** In all the samples, over about 3,000,000 reads were obtained each, and over 90% were mapped to the reference sequence. Over 43,000 genes were expressed in each sample. Compared with the control, the expression of 34 genes increased, and that of just 1 gene decreased in alcohol-treated mice. The increased genes were related to inflammation, such as chemokine ligand 6, CD14 and C3, what suggested that change of the expres-

sion concerning immune system might occur in mouse muscle after alcohol treatment. The decreased gene was ladybird homeobox homolog 1, which is required for muscle precursor migration and whose lack is manifested as an extensive loss of limb muscle in mouse. Our results indicate that the reason that chronic alcohol intake leads to muscle atrophy could be explained. We intend to analysis these genes and clarify the pathophysiology of muscle disturbances after repeated alcohol administration.

INTRODUCTION TO EXPRESSION OF SSTR4 IN MOUSE PITUITARY GLAND AFTER CHRONIC STRESS

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Introduction: Recently, death from overwork has been a focus of attention as one of the serious social problems in Japan. People who die from overwork must suffer from chronic stress. It is important to diagnose chronic stress to demonstrate death from overwork in forensic practice. Unfortunately, forensic pathologists do not have at their disposal any useful tool or marker to achieve the purpose. Although stress induces glucocorticoid (Gc) secretion from the adrenal glands, there is a huge variance of Gc levels in blood of the deceased due to the stress of agonal stage, and the hormone may not be available for forensic practice. We already reported that the somatostatin receptor 4 (Sstr4) increased after high-dose Gc treatment in pituitary adenoma cells (Kwashima et al. 2010). We examined Sstr4 expression under various stress intensities and durations, including chronic, in mouse pituitary glands as a preliminary study. **Materials and Methods:** 5,7 and 9-week-old male BALB/c mice were individually subjected to 1 h or 8 h/day of restriction stress for 1 day or 1 week. No restriction was employed in the controls. The mice were euthanized at 60 minutes after the final treatment and the pituitary glands were collected. The levels of Sstr4 mRNA from the gland were measured with the q-PCR method. **Results and discussion:** There was no significant difference in Sstr4 with a single and chronic 1h-treatment. Sstr4 in 8 and 10-week-old mice after a single 8h-treatment showed a significant decrease, but no such phenomenon was seen in animals subjected to chronic treatment. In 6-week-old mice subjected to the same treatment, there was a significant decrease of Sstr4 as compared to the controls and no significance was observed between single and chronic treatment protocols. We demonstrated that Sstr4 expression only decreased after single and intensive stress. Therefore, evaluation of Sstr4 might be useful in diagnosing the degree and duration of stress in forensic practice.

LEGAL OUTCOME OF SEXUAL ASSAULT CASES IS INFLUENCED BY ASSAILANTS' SOCIOECONOMIC STATUS: A REVIEW OF RAPE CASES OCCURRING IN EASTERN CROATIA OVER 33 YEARS

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Aim: The present study aimed to investigate whether socioeconomic status (SES) of the assailant influences the legal outcome of the sexual assault case. **Materials and Methods:** This retrospective study

investigated judicial records of 178 closed cases where charges of sexual assault had been pressed in the District Court in the region of Eastern Croatia over 33 years (1973-2006). The records included information on assailants, victims and legal outcomes. Legal outcome, education and employment status were binary-classified (imprisoned or not; less than 11 vs. 11 or more years of formal education; and employed/receiving education vs. unemployed/retired, respectively). **Results:** Less educated assailants constituted the majority (65%) of perpetrators. Imprisonment was more probable if the assault had happened at a public or at the victim's place and less probable if it happened at the assailant's place (66%, 67%, and 35%, respectively; $p = 0.025$). The regression model based on the assailant's educational level, employment status and previous criminal history was statistically significant ($F(2, df=3, N=114) = 9.912, p=0.019$). The model explained between 8.3% (Cox and Snell R square) and 11.4% (Nagelkerke R square) variation in legal outcome of the sexual assault case and correctly classified 71.1% cases. The assailant's education level was an independent variable that significantly contributed to the model ($p=0.010$), implicating that the less educated assailants were 3.1 times more likely of being imprisoned than the more educated assailants. **Discussion:** The estimation of the individuals' SES in this study was based on educational and employment status, while other contributive factors (income, occupation and wealth) could not be established from the reviewed data. We have found that in cases where it seemed that the crime with similar circumstances was committed, according to all the available data; the legal outcome was influenced by the assailant's SES and previous criminal history. These results are in line with the Black's theory (Bouffard et al., 2000), predicting that in an assault case committed by those of a higher social status against those of a lower social status ('downward' crimes), the law is less penal. We assume that assailants with a higher SES are perceived more trustworthy in the courtroom, leave better subjective impressions (based on the appearance and through interaction with the assailant) and can afford a (better) attorney. **Conclusion:** We have established that the assailants' educational and employment status are predictive of legal closure of a sexual assault case.

USEFULNESS OF ENTOMOLOGICAL METHODS IN FORENSIC INVESTIGATION – – A FORENSIC ENTOMOLOGY CASE FROM THE PRACTICE OF DEPARTMENT OF FORENSIC MEDICINE IN KATOWICE, POLAND

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Introduction: Arthropods, mainly insects, found on cadavers or at the crime scene provide priceless evidence (entomological traces), which may be successfully used by legal authorities. Knowledge about bionomics of necrophilic insects, the foundations of taphonomy and thanatology allow the entomologist for performing the role of a forensic specialist. Forensic medicine increasingly more often benefits from the achievements of biological sciences, especially forensic entomology. **Case presentation:** The corpse of a 55-year-old man was found 100 meters from the forest; his head was partially immersed in water. He was dressed, so only the head was available for insects. It was covered with eggs and larvae at different age. Also adult blowflies and beetles were present on the body. The autopsy showed that the cause of death was multiple gunshots to the head and the chest. To determine the time of death/the corpse's presence at the scene, an expert opinion of a forensic entomologist was commissioned. Samples of eggs, larvae, photographs from the crime scene and autopsy, and of course meteorological data from

the nearest weather station were sent to the specialist. The entomological-morphological analysis of samples revealed: eggs of Calliphoridae family, first instar larvae of *Lucilia* sp. and second instar larvae of *Lucilia caesar* (Linnaeus, 1758), which were the most numerous. However, specific developmental data for this species were not available. As an alternative, developmental data for the sister species, *Lucilia illustris*, were used. Minimal accumulated degree-hours (ADH) was calculated at 537.6 (46-47 hours), maximal – 772.8 (68-69 hours) and mean at 655.2 (55-56 hours). Thus, the minimal post mortem interval (PMI) was estimated at 55-56 hours. **Conclusion:** In the case of a cadaver found at the stage of late post-mortem changes, such as putrefaction, forensic entomological analysis of the arthropods present on the body may be really helpful for legal authorities, especially in determining the minimal post mortem interval. Collection of representative samples of insects, photography of the crime scene and the cadaver and meteorological data are indispensable for formulating an optimal opinion by a forensic entomology expert.

USEFULNESS OF COMPUTED TOMOGRAPHY IN THE DIAGNOSIS OF METALLIC FOREIGN BODIES

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The use of computed tomography (CT) in forensic medicine has been on the increase in the past few years. One of the applications of this method, in classic medicine as well as in forensic science, is identification and localization of foreign bodies. From the everyday practice it is well known that in plane crash victims, the localization of the foreign body and estimation of its type may be crucial. Determining whether the foreign body is metallic or not, even in CT, may be problematic. The aim of the study was to evaluate the capability of CT in estimation the type of different metallic foreign bodies, particularly according to the sort of the metal. CT studies were performed in the Department of Forensic Medicine of Collegium Medicum in Bydgoszcz, using a 4-slice scanner in victims of accidents, as an element of standard forensic procedure. All acquisitions were performed of corpses placed in a container made of polyethylene, in which the body was transported from the scene of accident. Different metallic foreign objects, made of various types of metal were located beneath and on the body as determined with respect to adjacent air, bones and soft tissues. Their appearance, density in Hounsfield units and artifacts were evaluated. The acquisition was repeated without the container to compare if it affected the CT images. It was noted that images with and without the container did not differ. The authors present the images of various types of metallic foreign objects.

UNDERGRADUATE TEACHING ON INTERPERSONAL VIOLENCE AND FORENSIC MEDICINE

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Introduction: "Interpersonal violence" is a term that encompasses sexual assault, rape, elder abuse and domestic abuse. All doctors, regardless of grade and specialty, will come into contact with patients who may have an abusive history – either acute or historical. However, most UK medical schools provide

little or no teaching on the issues surrounding interpersonal violence or forensic medicine. An education project was developed which aimed to equip medical students with an understanding of these topics, have confidence in managing presentations, and gain an awareness of referral pathways that are available for patients. **Method:** A questionnaire was developed to gauge the base level of medical student knowledge. Teaching for clinical medical students was then designed and piloted. Video lectures were recorded, discussion cases were added to the curriculum and resources were made available for further learning. **Results:** Students gave overwhelming positive feedback to the project. Many indicated that it will influence their future clinical practice, and has served to dispel myths and stereotypes that they had previously held. **Conclusion:** In busy medical curricula, it is often hard to find space for additional teaching on "new" topics. However, teaching can be successfully provided in a variety of ways, so that important topics can be covered concisely and effectively. Interpersonal violence can affect patients both psychologically and medically. An awareness of these issues is essential for all doctors, regardless of specialty.