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SPECIAL SCIENTIFIC SESSION ABSTRACTS

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SPECIAL SCIENTIFIC SESSION IN ARABIC LANGUAGE
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SSS1-OP-01

Hepatotoxicity of benzene in petroleum pump workers and green tea protection

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The current study investigated benzene hepatotoxicity and the role of green tea in reducing benzene hepatotoxic effect. The study was conducted on petroleum pump male workers. The subjects were divided into four groups each group contains 15 subject. Group 1 was benzene non exposed subject (negative control), group 11 was benzene non exposed subject with oral administration of green tea [900 mL (6 cups) tea/d in 150-mL (1-cup) amounts. Each 150 mL tea contained 0.5 g green tea (put in water after boiling)] for 6 months (positive control), group III was benzene exposed workers, and group IV was benzene exposed workers with administration of green tea for six months. Benzene and its metabolites (phenol and trans-trans muconic acid) were measured in urine by UV spectrophotometry. Hepatototoxicity was investigated throughout analysis of serum enzymes activities of adenosine deaminase, 5′ nucleotidase, β-glucuronidase, arylsulfatase and liver enzymes; aspartate aminotransferase and alanine aminotransferase. Green tea oral administration in the positive control group shows no significant changes in all the studied parameters in comparison with the negative control group except ALT and phenol which show significant increase and decrease respectively. Serum activities of all the studied enzymes were increased in benzene pump workers in comparison with the control groups except ALT. All enzymes activities were reduced in benzene pump workers treated with green tea for six months in comparison with non treated benzene workers. the current study revealed that grean tea may reduced the hepatotoxicity that may be induced by occupational exposure to benzene.

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SSS1-OP-02

Evaluation of occupational exposure to radiation induced alteration in Macro-, micro- and trace elements and ultra-structural changes on hair in Egyptian radiographers

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The purpose of this study is to provide documentation on the occupational exposure to radiation induced toxicity on hair in Egyptian radiographers. It was decided to investigate the macro-, micro- and trace element contents and ultra- structural changes resulting from exposure to radiation of scalp hair samples of radiographers. This study was carried out with 40 adult males and females (20–42 yr-of-age) from Tanta city, Egypt. Those subjects were divided into controls (n=20); persons with no known occupational exposure to radiation and radiographers (n=20). The controls were age- and lifestyle-matched to the radiographers (n=20). Scalp hair samples were collected. Hair concentration of chlorine (Cl), sodium (Na), calcium (Ca), iron (Fe), zinc (Zn), cupper (Cu), vanadium (V), cadmium (Cd), mercury (Hg), antimony (Sb), selenium (Se), manganese (Mn), terbium (Tb), barium (Ba) and chromium (Cr) were performed with inductively coupled plasma-optical emission spectrometer (ICP-OES). Hair samples were taken for electron microscopic analysis. The present study revealed that, Cl, Na, Ca, Fe, Zn, Cu, V, Cd and Hg concentrations were significantly increased and Sb, Se and Mn concentrations were significantly decreased in both male and female radiographers. No significant changes were observed in Tb, Ba and Cr in both male and female radiographers. The majority of the elements had higher concentrations in female hair samples than in male hair samples. Electron microscopic analysis showed some changes in hair and these changes were more pounced in females and male radiographers.

SSS1-OP-03

Can child discipline at the right age prevent child abuse? "an Islamic view"

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Background: Child abuse and neglect receive a great concern nowadays. Physical discipline in Islamic religion is limited to a certain age under conditions, so that it does not reverse to abuse; it is after discrimination age and before aggressive age i.e. between 7 and 14 years. Thus, the relationship between physical discipline and child abuse were studied, to provide an overview of the problem of violence against children and to base proposal for prevention of access to child abuse.
Methods: The data of 115 living and dead medicolegal cases confirmed to be child abuse in greater Cairo, Egypt during 1998–2005 was collected and analyzed.
Results: The study revealed no relation between abuse and gender. A significant correlation was found between motive and either age groups and weapon choice. The most important result was the high mortality, and the common motive was disciplinary action committed by young parents in the age group <7 and >14 years, i.e. in a wrong age of discipline. Child abuse that result from physical discipline was less in the age group 7–14.
Conclusion: Thus, to prevent the reverse of physical discipline to be child abuse, physical discipline should be according to Islamic rules; between 7–14 years and should not be before 7 or after 14 years. This agrees with an Islamic educational principle "play with your children 7, discipline them 7, and be friendly 7".
Key words: child abuse; physical discipline; Islamic rules

SSS1-OP-04

Management of snake bites

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Envenoming resulting from snake bites is an important health hazard in many regions, particularly in tropical and subtropical countries. Of the estimated 3,000 species of snakes in the world, there are only about 375 known species of venomous snakes, and even fewer that are capable of causing significant envenomation. According to morphological characteristics, they are classified to five families, Crotalidae, Viperidae, Elapidae, Hydrophidae and Colubridae. Some had added Atractaspididae as a separate sixth family, while others insist that it is one of the genera of the family Viperidae. Actually most of snake bites occur accidentally. Most of them occur on a limb of farmers in the rural tropics. Some bites occur through handling of snakes, and envenomation can occur even after a snake has been killed. Accurate statistics of the incidence of snake bite and its morbidity and mortality throughout the world does not exist; however, it is certain to be higher than what is reported. This is because, even today, most of the victims initially approach traditional healers for treatment and many are not even registered in the hospital. Hence, registering such patients is an important goal if we want to have accurate statistics and reduce the morbidity and mortality due to snake bite. Once the diagnosis of snake envenomation is ensured by clinical symptoms and laboratory tests, antivenom is the most important decision in the management of snake bite victim. It is concluded that first aids in the field and prompt transportation to nearest capable facilities for medical care or administration of antivenom greatly reduce the morbidity and mortality. History of exposure, local effect and systemic syndromes of envenomation, progression of symptoms and signs and laboratory data obtained in emergency department should guide the decision for antivenom therapy.

SSS1-OP-05

Prostatic diseases: Is it toxic or genetic? Study of TNF alpha gene polymorphism and cigarette smoking in relation to prostate cancer

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Background: Inflammation has been implicated as an etiological factor, in several human cancers. Allelic variants of the genes involved in inflammatory pathways are logical candidates as genetic determinants of prostate cancer risk. Besides genetic factors, environmental factors such as smoking is an important risk factor for prostate cancer.
Aim of the study: To investigate whether 308 G/A single nucleotide polymorphism of tumor necrosis factor–α (TNF-α) gene promoter region was associated with outcomes of prostate cancer and to analyze the gene environment interaction between 308 G/A TNF polymorphism and cigarette smoking.
Patients and Methods: A total of 282 patients with prostate cancer (143 smokers, 139 non smoker) and 112 patients with benign prostatic hyperplasia (105 smokers, 107 non smokers) along with 115 healthy control were enrolled in the study. Urinary cotinine and serum TNF and PSA levels were measured using ELISA technique. TNF genotyping was performed using PCR-RFLP technique
Results: prostate cancer was significantly associated with TNF GA+ AA genotype and this is accompanied by elevated plasma TNF, PSA and urinary cotinine. Caner smokers showed a high frequency of TNF 308 AA allele compared with other patient groups associated with increased TNF levels.
Conclusions: Results of this study support the hypothesis that polymorphism in proinflammatory genes may be important in prostate cancer development and the sequence variants in these inflammatory genes may interact with environmental modifiers such as cigarette smoking to increase prostate cancer risk.

SSS1-OP-06

DEATHS RELATED TO DRUG ABUSE IN CAIRO DURING (2003–2007)

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Background: Detection of drugs of abuse in postmortem cases is associated with some special difficulty compared with clinically derived specimens. One advantage over clinical situations is that many more alternative specimens can be collected in a postmortem setting. These may include hair, muscle, fat, lung, brain, bone, and even larvae of insects feeding on the host

Death caused by an acute intoxication requires three conditions to be met: the toxicological concentrations must be within the range typically encountered in such fatalities, the history and circumstances must be consistent with a fatal intoxication, and the postmortem examination must fail to disclose a disease or physical injury that has an extent or severity inconsistent with continuation of life

Method: This study is a retrospective descriptive analysis for drug abuser deaths autopsied at Zenhom mortuary (Forensic medicine Authority-Ministry of Justice) in Cairo during five years period (2003–2007).

Data collected from archived reports written by medico legal experts.

The study included 241 deceased assumed to be drug addicts according to their postmortem toxicological findings from total 4717 cases dissected in Zenhom mortuary.

Results: Results showed that males were predominant 90.5 % (218/241) and most cases relatively at youth age people. The commonest substances with abundant toxicological findings were alcohol, opioids and cannabis in percentage of (40.7 %, 21.6 %, 18.3 %) respectively. The commonest cause of death was due to drug overdose intoxication (40.2 %) which incorporates alcohol (49.5 %) and opioids (42.3 %); and rarely others. The other causes of death include mainly head injury and trauma, stab wounds and pathological condition; and to lesser extent asphyxia, drowning and others (firearms, burns and electrocution…etc.). Pathological investigations were done for the selected cases with evident toxicological findings and no definite cause of death was detected. At crime scene the evidences of drugs abuse were positive related mostly to opioid drugs.

Conclusion: It is concluded that this strategy of prospectively categorize deaths among drug addicts, constitutes an additional and simple means of standardizing the surveillance of the death among drug addicts that could allow for comparisons over time and between countries, and directs attention and gives warning to the drug abuse problem in Cairo, and determines the pattern and different causes of death among them.

SSS1-OP-07

TERATOGENICITY OF FLUOXETINE AND ITS EFFECT ON THYROID FUNCTIONS IN PREGNANT ALBINO RATS

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Detection of harmful effects caused by drugs has been of special importance on the scale of health care professionals and researchers. Fluoxetine is one of those drugs of questionable teratogenic effects; this is the reason for which this study was performed on pregnant albino rats to know the effect on their fetuses during organogenesis. Experiment was carried out on three equal groups each of 18 pregnant female rats. The first group was kept as control. The second and third groups were administered fluoxetine intraperitoneal in therapeutic and double therapeutic doses respectively. The drug was given from the 6th to the 15th days of conception. The members of second group showed a decrease in serum thyroxin (T4) and an increase in thyroid stimulating hormone (T.S.H). In third group, there was a decrease in serum Tri-iodothyronine and thyroxin with an increase in the level of thyroid stimulating hormone (T.S.H). Numbers of fetuses per mother, viable fetuses, dead and resorbed fetuses, fetal weight and length, as well as visceral and skeletal abnormalities were recorded. Examination of internal organs showed cleft palate 33.3 %, (Thymus hypoplasia) 20.8 %, enlarged heart 16.7 %, pulmonary hypoplasia 23 %, hepatomegaly 35 %, microcephaly 12.5 % in the third group. Examination of skeleton showed incomplete ossification of skull 16.6 %, absence of some vertebrae 25 %, abnormalities in the shape and density of the ribs 16.7 %, absence of some carpal bones 33.3 %, absence of some metacarpal and metatarsal bone 16.7 % and 8.3 % respectively in the third group.

In conclusion, fluoxetine drug has a direct response on maternal thyroid function and subsequently trans-placental transport of thyroid hormones. It was also proved that fluoxetine drug has a teratogenic effect especially in high dose. Therefore, it is important to use the recommended therapeutic dose under any circumstances and whatever is the severity of the disease.

SSS1-OP-08

VIOLENCE AGAINST WOMEN: A STUDY OF VARIOUS FACES OF ABUSE AMONG NURSES IN PORT SAID CITY

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Abuse hurts many women, destroys many families and weaken the entire community. It is a complex behavioral phenomenon involving physical, emotional and sexual abuse Abusive men batter, injury, and even kill women.

In this study, 170 primary health care units, nurses and teachers in secondary nursing school were interviewed, A structured interviewing

Questionnaire covers demographic, social data, and data regarding exposure to various aspects of abuse and its consequences were filled.

Surprisingly only 17.1 % know more than one aspect of women abuse. 38.3 % were physically abused in form of slapping, beating, kicking and injury by blunt or sharp objects. Among those 72.7 % were physically abused at least once during pregnancy.

Injuries occur in 78.8 % the form of abrasions, bruises, cut wounds, At least one aspect of emotional, sexual and financial forms of abuse were experienced by 94.1 %, 32.9 % and 31 % respectively.

Some factors have statistically significant positive correlation with women abuse as husband's mood and having children. Other factors have statistically significant negative correlation with women abuse as educational level of both partners and duration of marriage.

We conclude that women abuse is highly prevalent and dangerous among our study population. So, we recommended encouraging development of strategies for the elimination of all forms of violence and discrimination against women.

SSS1-OP-09

PREDICTION OF STATURE AND GENDER FROM FOOT MEASUREMENTS: EGYPTIAN VERSUS MALAYSIAN

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Anatomic structure of the foot shows ethnical variations by congenital, climatic factors, physical activities, nutrition conditions and used shoe type. Anthropometric measurements which are made to determine these differences give the specific data about the population. The present study is aimed to find out the reliability of foot measurements to determine stature, gender and

racial identification in Egyptian and Malaysian students. Studied groups included Egyptian group (57 students: 26 males and 31 females) and Malaysian group (54 students: 24 males and 30 females). All subjects who had recognized foot deformities were excluded from this study. The following measurements were recorded for each foot in centimeters: body stature, foot length, foot width, heel width, medial malleolus height and lateral malleolus height. The mean age of Egyptian group was 19.46±3.99 for males and 20.54±1.02 for females while it was 21.45±1.93 and 21.40±2.11 in Malaysian male and female groups respectively. It was found that there were statistical significant differences in foot measurements in males than females for both groups. The highest correlation was observed in foot width for Egyptian males and Malaysian females while there was no significant foot measurements correlation in Egyptian females and Malaysian males when stature and foot measurement relations were evaluated. Formulae were obtained by using linear regression analysis for stature estimation and logistic regression analysis for gender estimation. Gender estimation formula can help determine the gender with 93 % accuracy and 79.6 % accuracy via foot measurements in Egyptian and Malaysian groups respectively. The measurements that can determine the racial differences between Egyptian and Malaysian were the foot length and body stature in overall correct percentage 70.8 for each. In conclusion, foot measurements help in stature, gender and racial forensic identification.

SSS1-OP-10

SEX DETERMINATION BY THE LENGTH OF METACARPALS AND PHALANGES: X-RAY STUDY ON EGYPTIAN POPULATION

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Measurements of hand bones length have been shown to be sexually dimorphic in many nationalities. The aim of this study is to assess the accuracy of sex determination from the length of all metacarpals and phalanges of right and left hands using X–ray radiographs and to develop a discriminant formula that can be used in the Egyptians. One hundred Egyptians are included in the study (50 adult males and 50 adult females) in the period from December 2009 to January 2011 with mean age 31.60+9.44. Each is subjected to X–ray radiographs on both hands. The results reveal that males have significantly greater mean values than females for all metacarpals and phalanges of both hands and the Egyptian population has greater measurements in comparison to the other ones (e.g. Turkish and European Americans). In addition there is no significant difference between the right and the left hands in either males or females. The correct classification reached an accuracy of 88 % - 94 % by using both hands, while that for right hand only is 88 % and 88 % - 90 % for the left hand only. Regarding the accuracy of each bone, the present results revealed that 1st DP & PP and 3rd and 4th MC in the right and left hands are the best bones that can be used in correct sex determination. It is concluded that the length of metacarpals and phalanges (especially the 1st DP & PP and 3rd and 4th MC) could be used for sex determination. The right hand could be used as the left hand in determination of sex. Also the X–ray radiographs are good non invasive and simple tool in the determination of sex from the hand bones. Furthermore the regression equation for both hands and each hand separately is specific to Egyptian population and should be used after validation of the results in other ones.

SSS1-OP-11

STABILITY OF CARBOXYHAEMOGLOBIN IN BLOOD SAMPLES AT DIFFERENT PERIODS AND TEMPERATURES: A FORENSIC AND TOXICOLOGICAL TOOL FOR DIAGNOSIS

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Carbon monoxide is one of the most toxic agents in clinical and forensic practices. Diagnosis of CO poisoning is a challenging task and needs a high level of suspicion. Carboxyhaemoglobin level is considered the only established marker for diagnosis. The current work aims to determine the levels of COHb in blood samples collected from CO poisoned patients on admission and to re-estimate those levels after storage of samples for different periods and after incubation at various temperatures. The results showed that mean concentrations of carboxyhaemoglobin at time of admission=23.05±13.44. Levels demonstrated insignificant change after either refrigerated storage of samples for different periods (one, two and three years) or after their incubation in different temperatures (37°C for 12 hours, 40°C for 5 hours and 50°C for an hour). It can be concluded that COHb concentration remains stable in refrigerated stored blood samples for up to 3 years as well as those present in high temperatures. It is recommended to immediately collect and store blood samples from patients suspicious of Co intoxication when CO oximetry is not available to be sent to outside laboratory for analysis even after a long time has been passed. This could have great toxicological and medicolegal implications in cases of intentional poisoning, accidents and fires.

SSS1-OP-12

CHARACTERISTIC PATTERNS OF LIP PRINTS IN EGYPTIAN POPULATION SAMPLE AT DAKAHLIA GOVERNORATE

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Human identification is one of the most challenging sciences. Study of lip prints is a valuable emerging biometric in forensic medicine.The aim of the present study is to determine the pattern of lip prints and evaluate its uniqueness in a large sample of Egyptian population. The study included 955 subjects (2–65 years old). Lip prints were taken by direct rolling methods against hard background and each lip print was divided into six areas to be examined by magnifying hand lenses. Thereafter, they were scanned and examined by the microsoft office picture manager program. The results of this study revealed that the lip print pattern for each individual was unique and the complete vertical type was the commonest among males and females living in Dakahlia Governorate, Egypt. Sex could not be differentiated from the lip pattern. It can be concluded that lip print analysis

is a promising tool for personal identification. It is recommended to establish a database for all individuals in a certain locality, hoping to be a reference in both civil and criminal cases.

SSS1-OP-13

THE MEDICOLEGAL ASPECT OF ANTEMORTEM AND POSTMORTEM EYE EXAMINATION

Dr Fadwa Aly Elrouby

Forensic Medicine is fast growing and important branch of medicine. Some subdivisions of this subject like Thanatology, Toxicology are taking their shape separately. Forensic Ophthalmology is one of the newly emerging dimensions of the subject.

A forensic pathologist can gather a lot of medico-legal information by examining the eye both in antemortem and postmortem cases.

Various characteristics of the eye have also been thought to be useful in determination of PMI (postmortem interval). Specifically, authors have proposed measurement of vitreous humor analytes and intraocular pressure studies as a useful tool for this purpose. Through the years, a few papers have appeared which have suggested that the retina itself may be a telling means of determining PMI.

Various biometric technologies have been considered for use within the military, including facial recognition, iris scanning, finger scanning, and voice verification. Iris scanning was deemed to be the most suitable current biometric technology.

Ocular injuries are very common and are of great variety and complexity. Besides structural and functional loss they have social, occupational and medico-legal implications. Eye ball and its adnexa is a closely linked congregation of many delicate tissues which are affected in a variety of ways to various degrees.

A large proportion of abused children have internal eye damage and clinicians are alert to the necessity of ophthalmoscopic examination to look for retinal hemorrhages, vitreous bleeding and displaced lenses.

Aim of the work: To reveal the human eye as an important tool for many medicolegal investigations both in antemortem and postmortem cases.

So I recommend that:

Fundoscopic examination must be carried out after head trauma (in ICU).

Fundoscopic examination must be carried out after all sudden deaths of children.

Pars plana endoscopy is a conventional method in postmortem practices, which indicate the beginning of the non-interventional technique in the autopsy.

SSS1-OP-14

CORRELATION OF TRAMADOL BLOOD LEVEL WITH CLINICAL PICTURE OF INTOXICATED PATIENT OF POISON CONTROL CENTER

Prof. Dr. Fatma Abd el Hamed, Prof. Dr. Mohy Kadry el Masry, Prof. Dr. Amani Mahmoud Ahmed, Dr. Mohmed Adly and presenting by author Dr. Dalia Abd Elwahab Hassan

Tramadol is rapidly and almost completely absorbed and peaks 2 hours after administration. It is contraindicated in patients with past or present histories of opioid dependence. Toxic effect included lethargy, tachycardia, agitation, seizures, hypertension, and coma. Therapeutic use of tramadol may cause seizures, particularly on the first day after initiating therapy. Tramadol-related deaths have occurred both when it was used with other drugs and when it was used alone.

SSS1-OP-15

DEVELOPMENT AND VALIDATION OF EXTRACTIVE SPECTROPHOTOMETRIC METHOD FOR DETERMINATION OF VENLAFAXINE HYDROCHLORIDE IN PHARMACEUTICAL PREPARATIONS, AND FORENSIC URINE SAMPLES

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New procedures for the spectrophotometric determination of Venlafaxine hydrochloride by the reaction with ammonium reineckate, chlorophyllin coppered trisodium salt, picric acid and alizarine red were given. The methods depend on extraction of the coloured ion-associates formed into chloroform from aqueous medium. The absorbance of each ion-associate was measured at its maximum wavelength. Different factors were studied as pH, temperature, effect of solvent, interfering ions and sequence of addition to establish the best conditions for the determination also quantitation of the proposed method applying molar ratio and continuous variation method were given. The method is simple, precise and easily to be applied for detection of Venlafaxine hydrochloride in formulated pharmaceutical capsules and forensic urine samples. Comparison of the results of the proposed methods with those of official ones and complete validation study were also performed.

SSS1-OP-16

A STUDY OF LIP PRINTS DATA

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Old methods of classification of lip prints data based only on the shape of the white lines, but these methods are not reliable for comparison of an unknown lip print with a suspect lip print, as many individual lip prints cannot be identified from each other. To find out a more reliable method of prints identification, this work was performed on 480 lip prints from 60 different lips of 30 volunteers. These lip prints were divided into four groups: two groups, the prints were recorded by using slight and moderate pressure of the lips respectively and the other two groups, the prints were recorded after one month from recording the first two groups also by using slight and moderate pressure of the lips respectively. After examination of lip prints and comparing them with each other the following were concluded:

(1) Some lines were present in all prints of the same lip, these are classified as “primary lines” but other lines are present in some prints and disappear in other prints of the same lip these are classified as “secondary lines”

(2) Slight pressure of the lip during recording is the best method for obtaining a lip print record used for comparison

(3) Lip prints did not show changes after one month

SSS1-OP-17

NEW HPLC METHOD TO DETECT INDIVIDUAL OPIOIDS (HEROIN AND TRAMADOL) AND THEIR METABOLITES IN THE BLOOD OF RATS ON COMBINATION TREATMENT

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Drug abuse is both an age old and a constantly evolving problem in society. Trends in illicit drug use are highly fluid with new formulations increasing in popularity. For this reason, methods for illicit drug detection and analysis need to be continually updated so they remain useful and relevant. A recent trend in street heroin production has seen it diluted with large amounts of tramadol in addition to the classical diluents such as acetaminophen and caffeine. This study describes a sensitive, simple and accurate high-performance liquid chromatographic method with UV detection for the simultaneous detection of heroin, 6-acetylmorphine, morphine, tramadol and O-desmethyltramadol in blood of rats using a liquid-liquid back extraction method. The separation was performed on LichroCART RP-18e with particle size of 5 μm (250x4.6 mm) with mobile phase acetonitrile:50 mM KH2PO4 buffer, pH 7.1, using a gradient mode with a 1.0 mL/min flow rate. The calibration curves were linear in a concentration range 0.25-100 and 0.1-100 μg/mL for morphine and other analytes, respectively. Recovery values for the substances ranged between 59 and 83 %. This technique was successfully used in pharmacokinetic studies measuring 6-acetylmorphine, morphine, tramadol and O-desmethyltramadol in blood of rats intraperitoneally treated with a blend of 10 mg/kg heroin and 70 mg/kg tramadol. This technique shows promise for analysis of confiscated street heroin.

SSS1-OP-18

THE RELATIONSHIP BETWEEN AGOUTI-RELATED PROTEIN (AGRP) AND LEPTIN IN CANNABIS SMOKERS

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Introduction: Leptin is an adipocyte-derived hormone that is secreted in correlation with total body lipid stores. Cannabinoid components of cannabis are known to exert behavioral and psychotropic effects but also to possess therapeutic properties including analgesia, ocular hypotension, and antiemesis. Agouti-related protein (AgRP), a homolog produced in the arcuate nucleus of the hypothalamus and the adrenal gland, is an antagonist of the central melanocortin receptors, and is one of the most potent and long-lasting of appetite stimulators.
Aim: To determine the food intake mechanism in cannabis smoking subjects by studying the relationship between the key hormones of food intake control (leptin and AgRP hormones), and comparing with healthy, non-cannabis smokers.
Methods: Control Group I (GI) included 10 volunteers, healthy male (age mean±SD 38.7±2.3 y) with negative 11-nor-9-carboxy-tetrahydrocanabinol (THCCOOH) urine specimens. Group II (GII) included 10 males (age mean±SD 37.4±2.7 y), with THCCOOH positive urine specimens detected by qualitative analysis using gas chromatography–mass spectrometry (Agilent 6080 N; HP-5 ms; 30 m X 0.25 mm X 0.25 μm) and collected by the Forensic Medicine Institute Chemistry Lab. in Cairo, Egypt. Age and body-mass index (BMI) were matched, diabetic subjects were excluded. Plasma leptin concentrations were measured by quantitative radioimmunoassay (RIA) using a kit supplied by Diagnostic Systems Laboratories (DSL) Inc. (Webster, TX, USA). The method depends on a non-competitive assay in which the measured analyte is bounded between two antibodies. Plasma AgRP hormone was quantitatively measured by a Quantikine® kit supplied by R&D Systems Inc. (Minneapolis, MN, USA). This assay employs the quantitative "sandwich" enzyme immunoassay technique (ELISA). Statistical analysis was done by a Minitab 14 software.
Results: In GI , the mean±SD plasma leptin concentrations (6.39± 1.93 ng/mL) were higher than in GII (4.49±1.40 ng/mL), but the difference was statistically insignificant ($P>0.05$). Mean plasma AgRP concentrations (27.77±2.17 pg/mL) were higher in GII compared to GI (25.84± 1.93 pg/mL) , but the difference was statistically insignificant ($P>0.05$). There was a statistically significant inverse correlation between plasma leptin and AgRP concentrations in GI ($P<0.05$) with S= 1.30, R-Sq=59.6 %, R-Sq(adj)=54.5 %. A proportional correlation was found between plasma leptin concentrations and plasma AgRP concentrations in GII but it was statistically insignificant ($P>0.05$) with S=2.22, R-Sq=7.6 %, R-Sq(adj)=0.0 %.
Conclusion: The relationship between plasma leptin and plasma AgRP concentrations may be affected by cannabis smoking, and that may alter food intake mechanisms. A larger sample size is needed to confirm or refute this possibility.

SSS1-OP-19

Child deaths from family violence in Dakahlia and Damiatta Governorates, Egypt

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This retrospective study evaluated 41 cases of child deaths child deaths of both sexes from family violence and autopsied at Mansoura Morgue of Forensic Medicine Institute from 1996 to 2005. According to their ages, children were divided into four groups as follow: <3 years; 3–6 years; 6–9 years and 9– 12 years. Some socio-demographic parameters concerning the perpetrators were investigated such as level of education of fathers, parent marital status and residence. Also, the cause of violence and the manner of deaths were recorded. Results revealed that the highest incidence of children deaths was between 3 and 6 years (39.0 %) and the lowest incidence was between 9 and 12 years (4.9 %). The majority of perpetrators were males (75.62 %); they comprised children fathers in 60.98 %, while female perpetrators represented 24.39 %; they comprised the children mothers in 7.32 %. Fathers who lived in rural areas represented 75.6 % and 24.4 % in urban areas. Regarding the level of education of fathers of decedent children, 36.6 % were illiterate, 17.1 % were highly educated and 46.3 % were less than high school education. The marital status of those parents was as follows: separated couples (51.2 %), still married couples (22.0 %); fathers with multiple wives (26.8 %). Blunt trauma in abusive manner was the most common form (63.4 %). It was concluded that some socio-demographic parameters are considered risk factors related to intrafamilial violence and it should be considered by Family Planning Programs to estimate the magnitude of this problem in our community on a large scale, offering psychological assessment and

assurance for risky perpetrators aiming to prevent such fatal child abuse crimes.

5 July 2012

SPECIAL SCIENTIFIC SESSION 2 IN FRENCH LANGUAGE

SSS2-OP-01

Physical Violence Against Women: A Study Using Data from the Department of Forensic Medicine of the University Hospital of Annaba, Algeria

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I. **Introduction:** Violence against women today constitute a real public health problem.
II.**Objectives:** The objective of this work is to:
1. have quantitative data on the epidemiology of female victims of assault;
2. determine the medico-legal aspects of female victims of assault.
II. **Material-methods:** This was a retrospective, descriptive survey of 2269 victims of violence volunteers received in consultation unit for a period of one year (1 January 2010 to December 31, 2010).
Included were all victims of physical violence, who received a medical certificate that violence is voluntary some link with the author.
IV. **Results:** During the study period, there were 2296 victims of physical violence voluntary; a frequency of 22.15 %.

The age group most affected is represented by young women: (18 to 30 years)(37 %); Most of the victims living Annaba (85.57). Women with no occupation are most at risk (68.35), married (65 %) having between one to three dependent children (44 %) consult the victim as often quickly after the event (80 % less than 72 hours); The wounding agents were mostly blunt (72.33 %); Assessment of the lesions is represented in more than half the cases by contusion of the first degree (52.34 %); the cephalic end is the place most affected (82.06 %); 2 % of victims have benefited from an ITT than 15 days.(the barrier between a misdemeanor and a violation is 15 days in Algeria).
V. **Conclusion:** This phenomenon long considered a social problem and judicial, has today become an integral part of public health, where an absolute necessity for a multidisciplinary approach.

5 July 2012

SPECIAL SCIENTIFIC SESSION 2 IN SPANISH LANGUAGE

SSS3-OP-01

La medicina como garante de los derechos fundamentales en los casos de violencia de género. aportaciones desde la experiencia de España

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La aproximación tradicional a la violencia considerándola sólo como un delito es insuficiente para actuar eficazmente en su prevención, especialmente en aquellas violencias en las que la relación con el agresor y las circunstancias personales y sociales, la presentan como parte de la normalidad a través de distintas justificaciones. El ejemplo paradigmático de este tipo de violencias es la violencia contra las mujeres o violencia de género, una violencia caracterizada por la continuidad y agravada por episodios en forma de agresiones aisladas repetidas con más o menos frecuencia.

Las características de esta violencia originan graves consecuencias en los dos grandes planos de la víctima: en el plano individual produce una grave repercusión sobre la salud de las mujeres y un ataque a los derechos fundamentales de estas mujeres que quedan sometidas a la imposición de los agresores y a la limitación de la afectación de su estado de salud, y en el plano social se origina un deterioro de la salud pública y del marco constitucional que nos hemos dado para la convivencia.

En España, conscientes de la gravedad y trascendencia de este tipo de violencia, se desarrolló una Ley específica (Ley 1/2004, de Medidas de protección integral contra la violencia de género) para dar una respuesta global integrando todos los campos de actuación, con el objeto de salvaguardar los derechos fundamentales de las mujeres que sufrían una violencia de género. A nivel internacional, durante la Presidencia española de la Unión Europea el Consejo EPSSCO aprobó unas "Recomendaciones para la erradicación de la violencia de género" promovidas por España. En ambas normativas se insiste en el trascendente papel que ocupan los profesionales de la medicina como garantes de los Derechos Humanos a través de la atención y prevención de la violencia contra las mujeres.

La violencia de género es un proceso que termina atrapando a la mujer, y a sus hijos cuando los hay, dentro de la propia red violenta. Para evitar esta situación, una de las medidas más importantes es la detección precoz de los casos, y quienes mejor pueden hacerla son los profesionales de la salud. Diferentes estudios demuestran que las mujeres maltratadas acuden un 20 % más a las consultas médicas (Kramer, 2004; Roche, 2007), por lo que la actuación médica puede jugar un papel trascendente en el aspecto terapéutico y preventivo, tanto desde el punto de vista individual como social.

5 July 2012

ARAB UNION OF FORENSIC TOXICOLOGISTS (AUFT) SESSION

AUFT-OP-01

Sex Identification in Egyptian Population using Multidetector Computed Tomography of the Maxillary Sinus

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Background: Forensic anthropology involves the building of an antemortem profile of an individual from skeletal remains. This includes sex, race determination, and age and stature estimation. The present work was performed to investigate the possibility of estimation of sex from some radiologic measurements among a known cross-section of Egyptian population.
Method: In this study, by the use of Multidetector Computed Tomography (MDCT) scan, eight maxillary sinus measurements were assessed in 96 living non-pathologic Egyptians comprising 48 males and 48 females aged 20 to 70 years referred to the Radiology Department. These were subjected to statistical analysis.

Results: Two variables showed significant differences: cephalo-caudal and size of the left maxillary sinus. The study concluded that the correct predictive accuracy was 70.8 % in males and 62.5 % in females.
Conclusion: MDCT dimensions of maxillary sinuses are distinguishable for Egyptian population from other populations. Cephalo-caudal and size of the left maxillary sinuses is the most useful feature in gender determination in Egyptians.

AUFT-OP-02

Estimation of Stature from Anthropometric Cephalo-facial Dimensions in Upper Egypt

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Background: - Estimation of stature is considered as an important parameter in medico-legal and forensic examinations. In the identification of unknown human remains, stature estimation is a preliminary investigation. Sometimes, there are cases brought for forensic examination where only the cephalo-facial region is available, estimation of stature from cephalo-facial dimensions is without doubt important in forensic cases. This study was carried out to investigate the possibility of estimating height from different anthropometric cephalo-facial measurements.
Methods: - The study was carried out on 150 persons, 69 males (46 %) with age ranged from 21 to 54 years, and 81 females (54 %) with age ranged from 20 to 56 years. They were randomly selected from the faculty of Medicine in El-Minia University, in El-Minia Governorate, as medical students, technicians, and faculty employers after taking their informed verbal consent to share in this work. Besides stature 10 cephalo-facial anthropometric measurements were obtained from each subject by the help of a non stretchable plastic tape, the manual sliding caliper, spreading caliper and the standing height measuring instrument. The collected data were subjected to various statistical analyses.
Results: - The results indicated that some cephalo-facial measurements are strongly and positively correlated with stature. The measurements of the facial region have strong correlation with stature than those of the cephalic region. The regression analysis also showed that the facial dimensions give the better prediction of stature.
Conclusion: - In a conclusion that the mean estimated stature (MES) calculated from the cephalo-facial measurements is almost close to the mean actual stature (MAS) in both males and females. This was not exhaustive survey, but has provided a statistically valid technique. It is preferable that the results may be viewed as indicative of the feasibility of the technique in providing formulae applicable in the forensic science work concerned with fragmentary human remains.

AUFT-OP-03

Knowledge, perception and practices of medical ethics among residents of Alexandria University Hospitals, Egypt

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Objectives: This study was conducted to assess knowledge, perception and practices of residents in University Hospitals of Alexandria in relation to medical ethics in an attempt to assist in guiding their professional conduct and aid in curriculum development.
Methods: This study used a cross sectional design. A self-administered structured questionnaire about knowledge and perception of medical ethics and the role of an Ethics Committee in the healthcare system was devised, tested and distributed to all residents at the Alexandria University hospitals. Each doctor-patient interaction in the outpatient setting was observed and evaluated to fill an observational checklist. At the end of the outpatient visit, subjects were asked questions on whether they were satisfied with the way these principles are followed by the doctors interacting with them.
Results: Only 18.0 % (out of total 128) of residents had obtained their knowledge about medical ethics from their medical education as the medical ethics course is elective and not obligatory. About 70.1 were satisfied with the roles played by the ethics committee. Over two thirds of the residents (69.5 %) had satisfactory knowledge about medical ethics. Only 60.2 % had a satisfactory level of perception regarding ethical issues. The least perception % score level was in the domain of disclosing medical errors. Only 48.0 % of residents are considered as compliant to the principles of medical ethics in practice. About 52.0 % out of 100 patients were dissatisfied with their treating physicians.
Conclusion: The study highlights the need to identify residents who appear to be in need to increase their level of knowledge, perception and practices of ethical issues, to devise means to sensitize them to these issues and appropriately training them.

AUFT-OP-04

Effect of Time on Morphological and DNA Changes of Human Blood after Death

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Background: Estimation of the time of death is one of the most important problems in forensic medicine and law. Various specimens have been used to fulfill this goal, yet the use of blood remains the medium of choice for forensic investigations.
Method: In the present study, 30 postmortem blood samples were collected (20 forensic autopsy and 10 dead hospital cases).First, blood films were prepared, stained then examined by using light microscopy. DNA extraction and gel electrophoresis were carried out (RBC lysis, DNA extraction, DNA binding, washing, elution and DNA detection procedures using the horizontal gel electrophoresis unit and U/V transilluminator. Lastly, flow cytometric analysis was performed.
Results: Light microscopic examination revealed normal morphological features of samples examined early after death, whereas cellular changes in the form of pyknosis, vacuolation, nuclear fragmentation and disintegration were noticed throughout 6 to 72 hour intervals. Using gel electrophoresis, DNA was seen intact up to 18 hours after death then fragmentation progressed over 24 to72 hours postmortem (PM). Flow cytometric analysis confirmed these results with significant positive correlation between time since death and the progression of DNA degradation. Degraded DNA was inserted in regression equations for postmortem interval

estimation, where it gave the highest accuracy followed by the normal diploid and double (G2M) DNA.
Conclusion: Morphological changes in blood were merely descriptive as compared to gel electrophoresis and flow cytomety. Accurate histograms generated by flow cytometric analysis indicated the superior role of this technique for postmortem interval estimation

AUFT-OP-05

Pattern of Neonaticide in Egypt: A Ten-Year Retrospective Study

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Background: Neonaticide, the killing of babies in the first 24 hours of life, is deeply rooted in history. Evidence of ritual killing of babies with structural or aesthetic abnormalities has been documented amongst the Aztecs, ancient Chinese, the Mardudjara Aborigines of Australia and some African cultures. The killing of infants and newborns is one of the most common forms of murder by women. Some authors found that infants less than 1-year old are at 4 times greater risk of being murdered than any other age group, with the 1st day of life being the highest risk.
Aim: The current study is an attempt to find a pattern of neonaticide in Egypt.
Methods: all cases of neonaticide with complete data presented to the medicolegal Authority- Ministry of justice, from 2000 through 2009, have been included in the current study. Data include; geographical distribution, gender, socioeconomic class, parity data, results of external examination, postmortem period, injuries sustained and autopsy findings, causes of death and assailant- victim relation.
Results & Conclusion: the maximum percentage was recorded in December (16.9 %) in 2002 while the least rates were recorded in 2009 (5.1 %). Most of the cases came from high socioeconomic classes (54.2 %) female cases outweighed males ones (64.4 %). Causes of death include; Asphyxia (30.5 %), head injuries (54.2 %),and stab wounds (8.5 %). In 9 cases out of the 59 the assailants were the mother while only one case was killed by her grandmother.

AUFT-OP-06

Early postmortem biochemical changes and renal immunohistochemical expression of aquaporin-2 (AQP-2) to differentiate between saltwater and freshwater drowning: An experimental study

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Background: The examination of immersed bodies is one of the most important aspects in forensic practice. Further differentiation is also an indispensable aspect with respect to determination of freshwater drowning (FWD) or saltwater drowning (SWD).
Methods: The study was carried out on 30 adult male Balady rabbits weighted 1.5: 2 kg. The animals were obtained from the faculty of Agriculture-Minia University. Rabbits were divided randomly into 3 groups, 10 per each group. Animals received intraperitoneal injection of pentobarbital 50ug/gm. Group(I): served as control, rabbits were scarified by cervical dislocation, group (II): FWD model, rabbits administered distilled water (30 ml/Kg) at a rate of 1 ml/min., and finally group (III): SWD model, rabbits administered (3.5 %) NaCl in distilled water (30 ml/Kg) and also in the same rate. The average survival time of about 2:3 min. did not differ among the three examined groups. Within postmortem interval of <1 hour, samples were collected as cardiac blood from right and left ventricles separately, and also the vitreous humor from right and left eyes separately. Serum and fresh incubated vitreous samples were analyzed for levels of biomarkers {K, Na, Cl, Ca, Mg, blood urea nitrogen (BUN), and vitreous urea nitrogen (VUN)}. Kidney specimens were carefully dissected and prepared for immunohistochemical expression of aquaporin-2.
Results: The most efficient markers were the high left-right BUN for determination of hemodilution in FWD model, and the highly elevated left heart blood (Mg) level in saltwater aspiration. A characteristic feature of SWD was a low left-right BUN ratio and a marked elevation in the serum Cl, Mg, levels in the left heart blood. The cardiac serum showed a highly significant elevated K and BUN in FWD, meanwhile, in SWD there was a highly significant elevated Na, Cl, and Mg levels. Vitreous humor showed highly significant elevated Na, Cl, Ca, and Mg levels in SWD and a highly significant elevated K and VUN levels in FWD. Immunohistochemical studies revealed an enhanced expression of AQP-2 in the apical plasma membrane of the collecting duct principle cells in SWD group compared with FWD and control groups.
Conclusion: The current study suggested the usefulness of both serum and vitreous humor biochemical markers, together with the renal aquaporin-2 expression to accurately differentiate FWD from SWD in the early postmortem period.

AUFT-OP-07

Continuous Innovation of Effective Teaching Methods of Medical Ethics, Throughout Three Consecutive Academic Years Mu'tah University, Jordan

Amal Abdelrazek Mashali
Mu'tah University, Jordan

Background: In recent years medical ethics has been considered an important component of medical education. Medical ethics is a practical discipline that provides a structured approach for identifying, analyzing and resolving ethical issues in clinical medicine. Teaching of medical ethics at Mu'tah medical school was by 2008 through lectures for students of second year, that provides the students with basic ethical principles and concepts.
Methods: By 2009, the course was revised and designed to include assignments prepared by students beside the classical form of teaching through lectures.

Each student was preparing 2 assignments; an informed consent of an interventional procedure, and ethical evaluation of a research presented in faculty conference with formative assessment for assignments. Students showed interest and were eager to submit their assignments online. This was evident in their feedback.

By 2010,there was a need and necessity to change the method of teaching, helping students to apply basic facts and principles, analyze and solve problems in situations that are of ethical dilemmas. New methods of teaching medical ethics were implemented to allow self- learning and to assist students achieve the

intended learning outcomes through improving the quality of medical education.

Students were divided into small groups for problem solving of case studies of one topic. The instructor provided them with case scenarios of real ethical dilemmas, where they had to analyze, identify and define the problem of that situation through data provided and their knowledge from free readings. Students were able to reach appropriate solution taking into consideration the social and cultural context of Jordan. A checklist was used to evaluate their knowledge, attitude, behavior and thinking, which was a part of formative assessment.

Results: By the end of the academic year, feedback of students by a questionnaire revealed that 80 % of students were highly interested and showed a highly positive response. 70 % of students suggested to increase the number of topics in small groups, more preferred than lectures.

Conclusions: Problem solving of ethical dilemmas encouraged students in self learning and critical thinking.

AUFT-OP-08

The Interactive Engagement of Medical Students in Forensic Sciences Education

Amal Abdelrazek Mashali
Mu'tah University, Jordan

Background: The role of medical students in the medical profession is now being brought to greater height. Recently with applying the global standards of medical education, there is increased interaction among students as well as between students and staff members. The author has promoted the involvement of medical students in research. The mission of the program was to maintain and enhance the quality of Forensic Medicine education through engagement in research to provide them with meaningful educational experiences in community-based settings. The program aimed to enrich medical student education beyond classroom lectures and ward and to prepare them for conducting field research. It aimed also to assist the student in formulating and conducting analytical research.

Methods: Students were encouraged to select research topics, suggested and designed by the mentor, according to their own interests and talents. They were divided into groups responsible for data collection, tabulation and statistical analysis, in addition to presenting the results at the annual scientific conference of faculty.

Some students suggested to prepare a simulation of a crime scene, others prepared a video tape for prevention and diagnosis of child abuse and another one for accidental poisoning among children.

Results: Throughout three consecutive years (3 per year each of 30 students) the researches presented were:

1. Pattern And Outcome Of Cases Acute Poisoning Admitted To Al-Karak Governmental Hospital, Jordan During 2009.
2. The Pattern of Fingerprints among a Sample of Jordanian Population.
3. Prediction of Stature from Different Anthropological Measurements Among a Sample of Jordanian Population.
4. Age of eruption of Third Molar Tooth in a Sample of Jordanian Population
5. Predication of Sex from Length of Different Fingers in a sample of Jordanian population.
6. Causes of Death among Jordanian Population in Al-Karak Governorate.
7. Knowledge and Attitude Of Mutah University Students Towards Substance Abuse.
8. Pattern of Injuries at Al-Karak Hospital during 2010
9. Role of Medical Students in Quality Control Of Medical Education. Students' feedback showed a positive attitude.

Conclusions: Most students were interested in research activities. Engagement in research helped them acquire a broad grasp of research skills, learn to communicate ideas better, refine problem identification and solving, and work closely with faculty members and other students at various levels in laboratory and patient care settings.

AUFT-OP-09

Medicolegal Significance of Diffuse Axonal Injury; His topathological and Immunohistochemical Interpretation

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Background: In some head trauma cases, there is no obvious cause of death and no brain lesions detected despite the positive history and the short survival time. This study was conducted to evaluate immune-histochemistry for Beta-Amyliod Precursor Protein (ß-APP) in detection of DAI.

Method: This study was carried on 50 autopsy cases, 39 males and 11 females, aging between the 2nd to the 5th decades of life. Survival period was around 3 hours up to 4 weeks. The cause of head injury was determined. Complete autopsy were done. Selected brain sections were prepared for examination with routine hematoxylin and eosin (H&E), special stains Phosphotungstic Acid Hematoxylin (PTAH) stain and β-APP, Neuro Specific Enulase (NSE), S100, Synapto- Physin, Glial Fibrillary Acid Protein (GFAP) immunohistochemistry. The brain was assessed grossly at two settings; before its removal from the skull and after 2 weeks of fixation in 10 % buffered formalin.

Results: There was no significant difference between age and sex. The causes of head injury were more common due to violent assaults, and motor vehicle accidents. DAI was not always associated with skull fractures. There was a highly significant difference for the presence of intracranial hemorrhage. Both H&E stain and PTAH stain can diagnose brain edema, DAI, as regards axonal swelling and damage after 6 hours post traumatic survival period. In early survival stage, (ß-APP) is highly significant for detection of axonal swelling as early as 3 hours survival period. GFAP stain has highly significant value in detecting the glial cells and gliosis in the late survival stage.

Conclusion: The β-APP is a more sensitive and accurate method for early detection of DAI. It should be considered as an important technique that could provide valuable medico-legal evidences.

AUFT-OP-10

Sex Identification from Fingertip Features in Egyptian Population

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Identification of an individual plays a vital part of any medico-legal investigation. Fingerprint is considered to be the most

accurate and reliable part of identification. The present study was conducted on 752 healthy adult Egyptian subjects (380 males and 372 females) with age ranged from 20 to 30 years. Consents were obtained from all participants and their 10 digits were photographed to determine the sexual dimorphism by some fingertip features (ridge count, square area, finger breadth and finally ridge density) in Egyptians. Statistical analysis was made using a multivariate logistic regression variation analyses. Results showed that males tend to have significant longer (broader) finger breadth, larger square area, lower ridge count and lower ridge density when compared with females. The ridge density of the left hand was the most single accurate parameter in correct sex determination. The best classification accuracy of 82 % was generated upon combining ridge count, square area and ridge density. It was concluded that fingertip features of Egyptians can be used by medico-legal experts for accurate sex identification.

AUFT-OP-11

Diagnostic value of handwriting in patients with chronic liver diseases from medicolegal point of view

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Psychometric deficits were observed in patients suffering from chronic liver diseases with mild cerebral dysfunction. Analysis of handwriting in these patients has not yet been performed. The aim of this study was to comparatively investigate the alteration of handwriting before & after suffering of chronic liver diseases (CLD) from known traits of handwriting to diagnosis CLD from their handwriting. Also ageing of written documents was studied to exclude falsification.52 Patient (who can write) were chosen from cases admitted to Tropical Dept of Ain Shames & Al-Zahra hospitals with CLD they were classified according to their clinical manifestations to A(12), B(16). C (24) cases previous documents (while they were healthy) were obtained. Formal design of words was prepared by the experts and the diseased patients were allowed to write it after their consent. The patients with CLD had need to significant changes in traits of handwriting presented in the speed & pressure of writing, the size and the slope of words. New characters of handwriting appeared in the diseased patients which add to the diagnosis of CLD.

AUFT-OP-12

Self explosion: a case report from Egypt

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Egyptian Medicolegal Authority

Self explosion is one of the threats that face different parts of the world and the Arab region considered one of the hot areas regarding this terrorist problem. This kind of incidents are motivated sometimes by political backgrounds and reach their suffering to whole fair world and in another circumstances this crimes are motivated by cultural and religious misconceptions.

Case description:

The date is: 18/8/1999

The place is: an avenue from Al-Tahreer square

The assailant is a motorbike rider with an explosive bomb.

The attorney inquiries are:

Is this case of a suicide with manual ignition or it is a remote control mediated crime? the relationship of the dead bodies found in the crime scene to the assailant?? Are they related to each other and to the crime ? or just unfortunately passing by the scene area? the identification of the body remains founded at the scene and their relationship to the explosion. Analysis of the findings of this case regarding; examination of the scene, examination of clothes and explosive residue, examination of the dead bodies and body remains, will be set in details in this paper and how we reach to the answers of the attorney's inquiries

6 July 2012

EAFMS SESSION

EAFMS-OP-01

Education Committee EAFMS: Aim, Tasks, Activities

Ivan Aleksandrovich Dubrovin, Ojars Teteris Teteris, Rossen Hadjiev, Rima Jansarayeva, Tatiana Kot
Education Committee EAFMS

Main activities of EAFMS Education committee

1. Synchronization of basic documentation in legal practice of the Eurasian countries and adaptation in the national legislation:
– harmonization of statutes between the countries and work out of new statutes, cooperation with lawyers and legislators;
– international harmonization of demands of the expertise, which is also foreseen in the directives of Europe and Asia.

2. Harmonization of Forensic Medicine and Forensic Sciences practice. (Harmonization of Forensic Medicine Autopsy Rules):

– harmonization and unification of state-the-art methodologies and technologies and recommendation of new ones in the field of forensic sciences;
– development perspectives of complex expertise solving border-questions of different kind of forensic sciences;
– establishment of international commission of forensic experts for the expertise and consultations in difficult cases;
– developing prerequisites and requirements for expert candidates in specific fields of forensic sciences;
– developing recommendations for quality standards and accreditation of laboratories and technologies.

3. Harmonization of ante graduate and postgraduate education and specialization in EA countries:

– post-graduate education and specialization of experts;
– improvement of professional skills of the experts and organization of regional courses of improvement of professional skills;
– question of certification (accreditation) of experts.

4. Wider communication of forensic medicine experts and postgraduate and undergraduate students: exchange of experience, organization of congresses, workshops, in-service training in EA countries.
5. Unity in international associations.
6. Tendency towards the national and international accreditation of study programmes and institutions. Determination of quality standards.

7. Unification of principles for Certification and re-certification of practical and educational stuff of FS (establishment of e-teaching with following certification in different fields of forensic sciences).
8. Organization of an international magazine of FM&S (e-magazine):

– scientific magazine with high impact factor (Forming Editorial Board, organizing reviewing process, etc.)
– publication of scientific researches and practices in own Magazine;
– establishment of Internet home page and of magazine;
– development of electronic communications among the expertise and investigation institutions and legalization of transmission of data;
9. Support to new scientists, edition their scientific works, appointment of an opponents, consultation and conducting of scientific dissertations.
10. Organization of further (life-time) education.

EAFMS-OP-02

Concept and types of human rights

Bauyrzhan Duysenbaev
Department of Law. Kazakh National University after name al-Farabi. Almaty. Kazakhstan.

What are human rights? Human rights - this is the period starting from the time a person appears in the womb from the first second. Yes! We were taught to do so! And so it begins!

Human rights are international norms that help to protect all people everywhere from severe political, legal, and social abuses Examples of human rights are the right to freedom of religion, the right to a fair trial when charged with a crime, the right not to be tortured, and the right to engage in political activity. These rights exist in morality and in law at the national and international levels. They are addressed primarily to governments, requiring compliance and enforcement.

The Universal Declaration of Human Rights sets out a list of over two dozen specific human rights that countries should respect and protect. These specific rights can be divided into six or more families: security rights that protect people against crimes such as murder, massacre, torture, and rape; due process rights that protect against abuses of the legal system such as imprisonment without trial, secret trials, and excessive punishments; liberty rights that protect freedoms in areas such as belief, expression, association, assembly, and movement; political rights that protect the liberty to participate in politics through actions such as communicating, assembling, protesting, voting, and serving in public office; equality rights that guarantee equal citizenship, equality before the law, and nondiscrimination; and social (or "welfare") rights that require provision of education to all children and protections against severe poverty and starvation. Another family that might be included is group rights. The Universal Declaration does not include group rights, but subsequent treaties do. Group rights include protections of ethnic groups against genocide and the ownership by countries of their national territories and resources.

Every human being has the inherent right to life. This right shall be protected by law. No one shall be arbitrarily deprived of his life. "

The right to life describes the essential right to live, particularly that a human being has the right not to be killed by another human being. The concept of a right to life is central to debates on the issues of abortion, capital punishment, euthanasia, self defense and war. According to many human rights activists, the death penalty violates this right. The United Nations has called on states retaining the death penalty to establish a moratorium on capital punishment with a view to its abolition. States which do not do so face considerable moral and political pressure.

EAFMS-OP-03

The medico-legal system in Romania

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Talking about a system helping the justice and about "forensic experts" we must make a fine semantic difference between legal-medicine and forensic sciences.

In our national legislation, legal medicine is defined a medical branch, performing examinations, laboratory analysis and expertise regarding the living persons, dead bodies and biologic samples, with the aim to establish the true in the causes regarding the offenses against the life, body's integrity and person's health, as well as psychiatric and filiations expertise.

Forensic is a more comprehensive word, including all other sciences which are helping the justice in the finding of true.

The medico-legal system in Romania is a public centralized one, under the Ministry of Health, with a structure constituted by medico-legal institutes and medico-legal district services. The performed medico-legal activity provides scientific proves to the police, prosecutor office and court, for a better solution in penal and civil cases, bringing its contribution, by specific means, in the proper establishing of facts. The system organization will be described, with its advantages and problems.

EAFMS-OP-04

The Development of National Preventive Mechanism Against Torture in Serbia

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Background: There is a clear internationally recognized obligation of the states to prevent torture and ill-treatment. Following mid 2011 legislative changes related to Ratification of Optional Protocol to the Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment (OPCAT), the Protector of Citizens (Ombudsman) has been appointed to operate a National Preventive Mechanism (NPM) in Serbia.
Method: Prevention includes ensuring that a wide variety of procedural safeguards for those deprived of their liberty are recognized and realized in practice. To set up NPM in Serbia operational, Ombudsman designate 6 months "getting ready to start" period of extensive organisational and structural changes aiming to provide a fully functional mechanism to effective monitoring of places of detention. This inter alia includes securing of human and financial resources for NPM, setting up co-operation amongst the organisations contributing to NPM (Provincial Ombudsman and NGOs), collaboration with other agencies/organisations on national and international level, setting of range of education and training programs, and activities aiming to promote and increase visibility of NMP. An extensive methodology for future NPM's visits has been developed for different types of detention institutions, e.g. police stations, prisons, psychiatric hospitals, etc. A test visit has been carried out in December 2011.Finally, the plan of visits for 2012 has been agreed upon.
Results: A test visit to the high security department in one of the biggest prison in Serbia has been carried out. NPM team led by Deputy Ombudsman had a support of a psychiatrist and two forensic doctors. The focus of the visit that hasn't been announced in advance to prison authorities was to look for evidence of torture and other cruel, inhuman or degrading treatment or punishment. All sentenced prisoners in the

facility were offered a possibility to take part in individual interviews that served as a triage for subsequent examination by forensic doctors.
Conclusion: Setting up an NPM is a complex task for the states that took the obligation to prevent torture and ill-treatment. Our experience pointed out that for successful work of an NPM it is a fundamental to have meaningful preparations, and that participation of psychiatrists and forensic doctors could be helpful during this phase, but is essential for visits of places of detention.

6 July 2012

MEDITERRANEAN ACADEMY OF FORENSIC SCIENCES (MAFS) SESSION

MAFS-OP-01

Toxic Effects of Diazinon on the Reproductive System of Male Rats: The Possible Ameliorative Role of Vitamin C

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Background: Diazinon, an organophosphorous insecticide has been used in agriculture and domestic purposes for several years. The aim of this study was to analyze the reproductive toxicity induced by diazinon which caused biochemical and ultrastructural changes in adult male Wistar rats and to evaluate the possible protective effect of vitamin C.
Method: Vitamin C (200 mg/Kg, once daily), diethyl-ether (0.02 ml/Kg, once daily), diazinon (10 mg/Kg, once daily in) and vitamin C (200 mg/Kg, once daily)+diazinon (10 mg/Kg per day, once daily) combination were given to rats orally via gavage for 4 weeks. Testicular functions were assessed by testicular sperm count, sperm motility, biochemical studies and histopathology.
Results: By the end of the 4th week, rats given diazinon alone had significantly lower sperm count and sperm motility than the untreated control rats. Also, the rats given diazinon had significantly lower testosterone level, higher MDA (malondialdehyde) and lower catalase levels than the control group. Co- treatment of diazinon- exposed rats with vitamin C had an ameliorative effect on sperm count, sperm motility, testosterone, MDA and catalase levels. Light microscopic investigations revealed that 4 weeks of diazinon exposure was associated with marked testicular degenerative changes. Damage of spermatogenic cells and sertoli cells were observed by electron microscope. Mild degenerative changes were observed in the seminiferous tubules and interstitial tissues in the rats which received diazinon+vitamin C.
Conclusion: Thus, it appears that vitamin C ameliorates diazinon testicular toxicity but is not completely protective.

MAFS-OP-02

Choline esterase inhibitor insecticides poisoning: A comparative study between Atropine treatment regimen as intravenous drip versus repeated bolus dosing

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Introduction: There is a high incidence of fatalities from choline-estrase inhibitor insecticides (organophosphates (OP) and carbamates) in the developing countries. Early antagonism of pesticide toxicity associated with better outcomes. Although there is a Lack of treatment protocols, rapid and effective treatment of acutely intoxicated patients (especially with lifesaving antidotes as oxygen and atropine) should decrease fatalities and improve prognosis. The best regimen for the administration of atropine has not been established due to lack of randomized controlled trial studies.
Methods: A clinical prospective comparative study performed on 100 patients with acute OP or Carbamate poisoning, The patients will be classified into two groups; Group I which constitute 50 % of patients will receive repeated bolus Atropine dosage (time intervals and dosage depend upon clinical picture and age of the patient), Group II which constitute the other 50 % of the patients will receive IV Atropine infusion with dosage titrated against symptoms. Patients were assessed for cholinergic features on admission and on predetermined time intervals for the first 12 hours.
Results: On admission, 47 % of patients had pinpoint pupil, 19 % had Crepitations & wheezes, 50 % had wheezes only, 41 % had bronchorrhea, 20 % had bronchospasm, 4 % had respiratory depression, 87 % had vomiting, 61 % had diarrhea, 85 % had colics, 29 % had urinary incontinence, 31 % had fasciculation, 3 % had convulsions and 5 % had disturbed conscious level, mean pulse rate was 88.4 per min, 7 % were hypotensive and 1 % was hypertensive. Mean plasma choline esterase level was 1668 (normal standard>3000). Follow up showed more Atropine consumed in Group I than group II with nearly double the doses given in every time interval. Also, there is better response of pupil size at the 2nd hour in Group I. There was no observed statistical difference in other cholinergic manifestations response between both groups but with more rapid response in Group I cases. Also, there was no observed statistical difference between incidence of Atropine toxicity and recurrence of acute crises in both regimens but was fewer in patients of I.V. infusion group.
Conclusion: Although repeated bolus Atropine doses group consumed more atropine, it showed only faster response of pupil to atropine than I.V. infusion group and there was no other significant differences between both groups. Adequate monitoring of either regimens and adequate titration to symptoms may play an important role for clinical improvement of intoxicated patients.

MAFS-OP-03

Pattern of insecticide poisoning in the Gaza Strip

Ayman Ali Hamdan
Ayman Ali hamdan
Pattern of insecticide poisoning in the Gaza Strip
Ayman Ali Hamdan, head of RE –ROOM department –Beit_hanon hospital, Gaza, Palestine

Background: Organophosphate (OP) compounds are the most widely used group of insecticides in the world. Their acute toxicity causes a hazard both to professional and amateur users. In Gaza Strip OP insecticide poisoning comprises a considerable hazards on health, as agriculture is the main source for food and income for Palestinians especially who live in refugee camps.
Aim of the study: This study aimed at evaluating the pattern of OP insecticide poisoning in Gaza strip region.
Material-methods: Sixty cases of OP insecticide poisoning admitted to Gaza general hospitals were reviewed via their medical records as regard

Epidemiological data (age, sex, residence, occupation…etc) the manner of poisoning, the route of exposure, clinical presentations(level of consciousness, pupil size and reactivity, convulsions,

abdominal pain, vomiting, wheezing, crepitations), the given treatment and outcome.

Results: Analysis of data revealed that children were the most affected group by accidental ingestion, male victims outweigh that of the female ones, meanwhile most of female cases were due to suicide, while the majority of male cases were accidentally exposed during work.

Recommendations: mandates of raising awareness about the risks and preventive measures of pesticide exposure, the need for legislations to control the use of pesticides and finally, increase social work as for enforcing programs to support women to decrease rates of suicide among them and to enhance level of home safety especially for children.

MAFS-OP-04

Organophosphate poisoning presenting as acute respiratory distress in a neonate: case study

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Organophosphate poisoning [OP] is a potentially fatal but completely treatable condition that is still very prevalent in our country. Early recognition is paramount in preventing fatality. Although rarely reported, it does occur in infants, where history may not be forthcoming and initial presentation often misleading. We report the case of neonate admitted to neonatal intensive care unit (NICU) of Abu El-Reish Hospital, Faculty of Medicine, Cairo University with respiratory distress, pinpoint pupils and hypotonia. The symptoms appear after spraying the home by insecticides. Plasma pseudocholinesterase level appeared to be low, consistent with acute intoxication with organophosphate insecticide.

Management of organophosphate poisoning consists of airway management, administration of oxygen and fluid, as well as atropine in increasing doses and obidoxime (Acetylcholine esterase reactivator). Plasma pseudocholinesterase analysis is a cheap and an easy indicator for organophosphate insecticides intoxications and could be used for diagnosis and treatment monitoring.

MAFS-OP-05

Risk Assessment Induced by Different Kinds of Spraying Equipment on Pesticide Applicators and Farm Workers During Intensive Application of Pesticides in Cotton Season

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Background: Fakous province in Sharkia Governorate constitutes one of the largest agricultural areas in Egypt. The majority of people in this province rely on agricultural activities for subsistence. In cotton cultivation season continuous application of pesticides are commonly used to increase agricultural productivity. Different kinds of spraying equipment were used.

Methods: In this study a cohort of 210 intensive agricultural pesticides applicators and farm workers from Sawada and Akyad Elkepplia villages in Fakous province were assessed according to the type of spraying equipment they used. Conventional motor (300 L / Feddan) and knapsack motor sprayer (20 L / Feddan) were commonly used by farmers. Contamination on applicators was detected on head, body (thorax / abdomen) and legs with different percentages according to the spraying tools.

Results: The revealed that contamination with pesticides due to knapsack motor sprayers 0.76 % on head, 4.8 % on body and 5.8 % on legs however; conventional motor sprayer induces contamination with 3.6 % on head, 23.7 % on body and 29.1 % on legs. Several criteria for estimating pesticide contamination by the previous expressed machines were used. The most important one being serum cholinesterase (AChE) depression as a reference biomarker. Sprayers expressed changes in serum glucose level with two types of sprayers presented as well as; reduced glutathione level (GSH) in erythrocytes. However, an increase in each of total serum protein and albumin was recorded also; elevation in lipid peroxidation biomarker malondialdehyde (MDA) was recorded. Changes in serum biochemistry namely enzymes reflecting cytotoxicity were recorded; an inhibition in alanine aminotransferase (ALT) and glutathione–s-transferase (GST). An increase in aspartate aminotransferase (AST) and glutathione reductase (GR) was observed the most pronounced results were observed in conventional motor sprayers.

Conclusion: Changes in enzymes activities found in this study are linked to the adverse health effects related to chronic pesticide toxicity that may led to pathophysiological diseases, cancer or neurodegenerative disorders, are attractive hypothesis that warrants further investigations.

MAFS-OP-06

Clinical Study of the Relationship Between Organophosphate Insecticides' Exposure and Allergic Asthma in Preschool Children

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Bronchial asthma is a major public health problem affecting millions of people worldwide. There is an increasing concern that the prevalence of the disease could be attributed to new or modified patterns of exposures to chemicals, including insecticides. Organophosphates insecticides (OPs) account for 50 % of all insecticides used. Chlorpyrifos is the third most commonly used among all pesticides applied by homeowners and commercial applicators. Interlukin-4 (IL-4) is one of the most important cytokines underlying the development of the allergic asthma. The aim of this work was to evaluate the relationship between the immunomodulatory effects of the environmental exposure to organophosphate insecticides and allergic asthma in preschool children living in rural areas. The current study was conducted in the period from October, 2008 to October 2010. 200 children were classified into 2 groups: Group I: 100 diseased preschool children, living in rural areas and diagnosed as allergic asthma, selected from the pediatrics outpatient clinic, Zagazig University Hospitals. Group II: Control group, 100 healthy children matching the diseased group in the age, sex and residency, selected from the outpatient clinic of minor surgeries, Zagazig University Hospitals. There was a non-significant difference between males and females or between different age categories of the asthmatic group as regard severity of asthma. Serum interleukin-4 and

concentration were significantly higher in the asthmatic group as compared to the control group. A significant positive correlation was found between either IL-4 level and clorpyriphos concentration and the severity of asthma. Moreover, there was a significant positive correlation between chlorpyrifos concentration and IL-4 level in the asthmatic children. It was concluded that exposure to organophosphate insecticides (OPs) is associated with elevated serum IL-4 which plays important role in the pathogenesis of allergic asthma. This immunomodulating effect of OPs can explain the increased prevalence of allergic asthma among rural preschool children exposed to these insecticides.

MAFS-OP-09

Adult Albino Rats Spleen Toxicity by Aflatoxin B1 and its Amelioration by Green Tea Extract

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Aflatoxin B1 is a mycotoxin produced by *Aspergillus flavus* or *A. parasiticus*. It is a frequent contaminant of food and feed of human and nonhuman species resulting in severe toxicity and carcinogenicity. Green tea extract has a known anti free radicals, anti-inflammatory and anti-carcinogenic properties. The aim of the present study was to evaluate the ameliorative role of green tea extract against Aflatoxin B1 –induced spleen toxicity in adult albino rats. 100 adult male albino rats were divided into 4 groups and daily administered: Group I (Control Group): (a): negative control, (b) oral dose of olive oil, Group II: oral dose of green tea extract (200 mg/kg) 4 days before starting other administrations and continued till the end of the experiment, Group III: oral dose of Aflatoxin B1 (300ug/kg) for 12 weeks Group IV: oral dose of green tea extract (200 mg/kg) and Aflatoxin B1 (300ug/kg) for 12 weeks. After 8 and 12 weeks glutathione peroxidase, catalase and superoxide dismutase were assessed, histopathological and immunohistochemical examination of spleens sections were done. At 8th week, Aflatoxin B1 toxicity group showed significant decrease in glutathione peroxidase, catalase and superoxide dismutase activities (p 0.05), in comparison to the control group with irregular and ill defined outlet of mantel zones. After 12 weeks, few hemosiderin-laden macrophages, neutrophils and strong expression of CD20 were added to previous toxic effects. Green tea treated rats showed a non significant increase in the enzymes activities (p 0.05) after 8 weeks but, significant increase in their levels after 12 weeks. Spleen micro architecture was more or less similar to that of control group with normal CD20 expression after 8 and12 weeks of the study. However, the number of hemosiderin-laden macrophages was still reduced. It was concluded that green tea extract can offer significant ameliorative effects for aflatoxin B1-induced spleen toxicity through its anti free radical and immunoprotective properties.

MAFS-OP-10

Effects of Chronic Diethyl Hexyl Phthalate Exposure on the Liver, Kidney and Spleen of Adult Male Albino Rats

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The human toxicity of DEHP and other phthalates continues to be a subject of intense debate between public health advocates, researchers and the industry. Research has linked DEHP to a variety of adverse effects including hepatotoxicity, nephrotoxicity, teratogenicity, and testicular toxicity. Therefore, this experimental study aimed at studying whether the chronic exposure to DEHP using the premeasured dose during hemodialysis induce toxic changes in the liver, kidney and spleen or not. This was done by using the lowest and highest DEHP doses of exposure during hemodialysis. The toxic effects were studied through the chemical analysis of serum levels of AST, ALT, ALP, albumin, BUN & serum, creatinine, measuring the catalase activity in liver, kidney & splenic tissues, histopathological and BrdU immunohistochemical examination of the target tissues. BrdU staining was used to measure replicative-DNA synthesis. Significant increases ($p<0.05$) were recorded for serum AST, ALT and albumin DEHP-treated groups, while the remaining chemical parameters didn't show any significant changes ($p>0.05$) compared to the control groups. The degree of histopathological changes in the liver, kidney and spleen were confirmed by the changes in the catalase activity and the immunohistochemical detection of replicative DNA synthesis. The spleen showed the lowest change recorded for catalase activity and replicative DNA synthesis. Accordingly, it can be concluded that DEHP-dose of exposure during hemodialysis can induce toxic effects mainly on the liver and kidney tissues and, to a lesser extent, on spleen.

MAFS-OP-11

Pyrethroid Toxic Effects on some Hormonal Profile and Biochemical Markers among Workers in Pyrethroid Insecticides Company

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Background: As Pyrethroids use is common and likely increasing worldwide, so more researches are needed to know its hazardous effects.
Objectives: This study was designed to evaluate chronic toxic effects of synthetic pyrethroids on some hormonal profile (testosterone, estrogen, progesterone & thyroid hormones), respiratory system, liver and kidney functions, in addition, trying to clarify some underlying mechanisms of toxicity through measuring total antioxidant capacity, lipid peroxidation markers (malondialdehyde), and IgE among workers exposed to pyrethroids.
Subjects and Methods: The study included eighteen workers of both sexes exposed to pyrethroids in pyrethroid Insecticides Company. Twenty non exposed workers from the administrative workers of Faculty of Medicine Zagazig University were selected as a control group. All participating workers were interviewed using a pre-composed questionnaire, furthermore they were examined clinically and investigated by measuring some blood parameters as testosterone, estrogen, progesterone, thyroid hormones (T3, T4 and TSH), IgE, ALT, AST, creatinine, urea, total-antioxidants and malondialdehyde according to standard procedures.
Results: The studied groups were matched as regard gender, age, duration of work, marital status, income, residence and smoking habit. There was a highly significant prevalence of headache, cough & wheeze among exposed workers compared to control group (p<

0.001). Moreover, the exposed group had significantly lower values of testosterone, T3, T4, and pan-antioxidants, as compared to control group ($p<0.001$). Also, there was a higher significant values of TSH, IgE, ALT, AST and malondialdehyde among exposed workers as compared to control group ($p<0.001$).

Conclusion & Recommendations: Chronic exposure to pyrethroid insecticides may cause endocrine disrupting effects, respiratory problems, liver function impairment, beside oxidative stress and lipid peroxidation. So we recommended, improving working condition. Restriction of unlimited use of pyrethroid insecticides especially at home and agricultural purposes. Further researches are needed to evaluate pyrethroids effect on large sample to obtain detailed information about the exposure route, pathways, other mechanisms of toxicity and other health hazards.

MAFS-OP-12

Polycyclic Aromatic Hydrocarbons: Role of Apoptosis in Dermatotoxic and Carcinogenic Effect in Asphalt Road Paving Workers

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Asphalt contains a complex mixture of polycyclic aromatic hydrocarbons (PAHs). This work aimed firstly to assess the dermatotoxic and carcinogenic risk associated with chronic PAHs exposure, and secondly to investigate the causal relationship between PAHs exposure & cancer through studying the effect of PAHs on apoptosis. This effect was studied by examining the expression pattern of P53, Bax and Bcl-2 apoptotic proteins in skin specimens from road paving workers. The study was conducted on one hundred and fifty two male subjects classified into 122 asphalt fumes exposed workers and 30 non exposed workers (control group); careful skin examination and skin biopsies were obtained from all participants after written consent. Biopsies were examined histopathologically and immunohistochemically. SPSS version 15.0 was used for statistical analysis. Results showed that 71 (58.19 %) PAHs exposed workers had erythema, itching, excoriations, chronic dermatitis, chemical keratosis, keratoacanthoma (K.A) and nine (7.38 %) exposed workers had squamous cell carcinoma (SCC). Imunohistochemically, wild type P53 was significantly higher in epidermal keratinocytes of PAHs exposed normal uninvolved (non lesional) skin ($t=2.51$, $P=0.04$) and mutant type P53 was significantly higher in SCC cases ($t=4.79$, $p=0.003$) when compared with control. A significant increase in Bax expression was observed in all asphalt exposed workers when compared with the control ($t=2.73$, $P=0.03$). A significant decrease in Bcl-2 expression was noted in PAHs exposed uninvolved skin ($t=2.49$, $P=0.047$) while none of the 9 tested SCC cases were positive for Bcl-2. It could be concluded that chronic exposure to PAHs fumes in asphalt workers may increase the risk for developing dermatotoxic and/or cancer through disturbing apoptosis. Although PAHs exposure can disturb P53, Bax and Bcl-2 apoptotic proteins, more extensive researches on other factors involved in controlling apoptosis as Bcl-xl, Caspase family and Fas are to be undertaken.

MAFS-OP-13

Acute Effects of Bango Abuse (Cannabis Leaves)

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Background: Herbal cannabis is the most widely trafficked drug and the most commonly encountered form of the drug. North America is the largest source of cannabis herb production. Based on UNODC (United Nation of Drug Control) estimation, North America accounts for 33 %, South America accounts for 21 % of the global production of cannabis followed by Africa and Asia. The effects of cannabis depend upon the dose received. The main reason why most young people use cannabis is to experience mild euphoria, relaxation and perceptual alterations, including time distortion and intensification of ordinary experiences, such as eating, watching films, listening to music and engaging in sex. The present work revealed the acute effects of cannabis on male albino rat.

Methods: LD50 of the bango was determined and then selected groups of rats were given a dose equal the calculated LD50. The histopathological effects were determined on brain, liver, kidneys and testicles

Results: All the studied organs affected markedly due to the acute administration of the bango in the form of irregular, shrunken cells in brain, congestion and highly degeneration of the liver cell, severe destruction of the tubules and glomeruli in the kidney, and disruption of the continuity of the testicular cells.

Conclusion: Bango abuse leads to severe effect on different organs and this may subsequently lead to apoptosis and fibrosis of the organs and this depend mainly on the dose and duration of administration.