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Moderatori / Chairs:

Dr. PERLEA SORIN

Lt.col.dr. NĂFTĂINĂILĂ FLORICA

1. GLAUCOMA – AN UPDATE PROBLEM

Iulian Manoliu M.D.

Summary

Glaucoma is defined as *a progressive optic neuropathy with a multifactorial pathogeny*.

Glaucoma is an important cause of blindness, which affects 40 million people worldwide. In Europe its prevalence is 3,5%, while in the USA, it may reach 9%.

The discovery of glaucoma dates back to the 17th century, its important role as a cause of blindness has been known since the 19th century. Initial comprehension of the pathogenesis and treatment belong to the 20th century.

Its prevention will probably be the work of the 21st century.

Since the 17th century, various researchers have been discovering the importance of vascular factors in glaucomatous disease.

2. BRONCHIAL ASTHMA: FROM GINA TO DAILY PRACTICE

Dr. Sorin Perlea

Summary

According both with the pathophysiology and with the evidence-based medicine, current treatment guidelines of bronchial asthma approach this disease by its level of severity. The treatment must interfere both the smooth muscle dysfunction and the airways inflammation with its subsequent remodeling.

The demonstration of the pivotal role of the leukotrienes in the allergic inflammation (i.e. remodeling of the Epithelial Mesenchymal Trophic Unit by hypertrophy of the airway smooth muscle and fibrosis of extracellular matrix, augmented eosinopoiesis and chemotaxis of the eosinophil, ciliary activity impairment and neural dysfunction) determined the development of a new therapeutical class, i.e. the antileukotrienes (ALTs).

The classic indications of the treatment with ALTs, i.e. the recurrent wheezing, the pediatric asthma, the exercise-induced asthma, the aspirin-induced asthma, and generally, all cases of asthma, in order to achieve the corticosteroid-sparing effect, are widening, due to new additive properties of the ALT.

Taking in account data from the evidence-based medicine, the ALTs prove a minimal difference between efficacy (results obtained in clinical trials) and efficiency (results obtained in "real world"); the compliance is also very good.

The ALTs complete pathophysiologically and clinically the therapy of bronchial asthma, offering a "fine tuning" for this complex syndrome with such a polymorphous clinic and variable response to treatment.

3. HOW TO CHOOSE AN INHALED CORTICOSTEROID?

Violeta Perlea M.D., Sorin Perlea M.D.,

Summary

The inhaled corticosteroids have a cornerstone role in the treatment of bronchial asthma, by their pleiotropic anti-inflammatory effects, which enable them to down-regulate the redundant mechanisms involved in asthma's pathogeny.

Because bronchial asthma is a chronic disease, and the treatment is set for long periods of time, there is an increased risk of side-effects, both local and systemic, especially at high doses. The three generations of inhaled corticosteroids molecules have different characteristics, the therapeutical option trying to obtain equilibrium between benefits and side-effects.

The selected, by the clinician, inhaled corticosteroid must be as close as an ideal molecule; that is: to have a high therapeutical index, imposed by the intrinsic pharmacokinetic properties of the molecule (i.e. a high clearance, a large volume of distribution, a high degree of protein-binding, a high receptor affinity, a short half-time life), a good efficacy and an excellent safety profile. Other factors should also be taken into account: the characteristics of the inhalation device and of the propellant (both influencing the pulmonary deposition), the existence of an individually response, the severity of the disease (the patients with mild form of disease are prone to more adverse effects at the same doses), as well as patient-related characteristics (compliance, adherence and concordance).

The administration of the smallest possible doses, using an appropriate device, suited to the age and abilities of the patient, a lower cost and acceptable administration, the possibility of association with bronchodilators, represent an adequate approach of the asthmatic patient.

4. CONGENITAL HEART DISEASE DIAGNOSED AFTER 60 YEARS OF AGE - CASE PRESENTATION -

Mirela Anghel M.D., Ph.D., Elena Radu-Sultănescu M.D.

Summary

A 63 year old man presented with an 12 month history of declining exercise capacity. In recent months, he noted onset of more profound exertional dyspnea and bilateral lower extremity edema.

The diagnosis of atrial septal defect should be considered when investigating patients with possible intra-cardiac shunts causing right heart failure. Imaging with cardiac transthoracic echocardiography made the pre-operative diagnosis possible, and clearly demonstrated the defect anatomy and blood flow through the defect on color Doppler. Appropriate management with surgical closure was then instituted.

Atrial septal defect is the most frequently encountered major congenital cardiac disorder in the adult population, with a prevalence of 0.2 to 0.7 per thousand. Patients often present late in life because symptoms are rare until later in life and physical findings may go undetected, such was the case presented in this paper.

5. PSEUDOACHALASIA - IN A YOUNG MAN - CASE STUDY

Florica Năftănăilă M.D., Florin Năftănăilă M.D., Dragoș Vlad M.D., Maria Dumitru M.D., Grația Dinu M.D.

Summary

Introduction: Pseudoachalasia is a clinical, radiological and manometrial syndrome similar to achalasia. From the frequently malignant causes of the pseudoachalasia adenocarcinomas located to the esogastric junction are known in a proportion of 70%. The main differentiation criteria are: clinical (age, short evolution of the symptoms, impregnation signs, sex), paraclinical (the endoscope passes with difficulty, ECHO-EDS – criteria, CT/skan, endoscopic biopsy, echografic criteria, histology).

Aim and method: We present the case of a 21 year old man which has a 1.5 years of history a dysphagia, weight loss, asthenia, fever. Clinical examination showed a young patient, no smoking and alcohol consumption, with normal color of teguments and mucous, which accounted weight loss severe dysphagia included liquid, cardio-respiratory stable.

Paraclinical investigations indicate: no abnormality laboratory test-hematological or biochemistry. The radiological baritat exam showed an oesogastric symmetrical stenosis with an upper level minim dilation oesophagus. EDS showed a dilated oesophagus, stenosis of the oesogastric junction ($\Phi \approx 8$ mm) by a circumferential formation, ulcerative-vegetant, like neoplasma macroscopic aspect, we prelevated a multiple biopsy of this level. Transabdominal ultrasound normal aspect.

CT-scan, toraco-abdominal: mediastinal regional lymph node (Φ 1,5 cm) – without presences of metastases (liver or other location).

Histological exam: adenocarcinoma, moderate differentially, ulcerated.

After completing the investigation and establishing the stage of the disease, the patient was quited to the surgery and oncology clinic.

6. BILIARY REFLUX ESOPHAGITIS IN CHOLECYSTECTOMISED PATIENTS

Florica Năftănilă M.D., Mihaela Popescu M.D., Elena Sultănescu M.D., Mariana Dumitru M.D., Magdalena Vișănescu M.D., Anca Guțu M.D., Manuel Bucur M.D.

Summary

Introduction: In the postcholecystectomy syndrome (PCS), losing of the tank function of gallbladder determines disturbance of normal biliary flux with its continuous increase in the upper digestive tract and appearance, in some cases, of reflux esophagitis.

Aim and method: Our study aim is to identify reflux esophagitis by upper digestive endoscopy in cholecystectomised patients for gallbladder stone or acute nonlithiasic cholecystitis disease.

The study included 28 patients (20 females, 8 males), mean age $45,5 \pm 2,1$, years, which precedents of moderate pains in right hypocondrum and epigastrium, reflux symptoms: heartburn, regurgitations, biliary vomiting, who underwent to upper digestive endoscopy and abdominal echography.

Results: Esophagitis degree II (Los Angeles) and abundant biliary reflux presented in 14 women (50%), while 6 men (21.4%) with PCS were found with biliary reflux and esophagitis degree I-II or/and chronic antral gastritis.

Conclusions: The prevalence of esophagitis secondary to biliary reflux, in PCS, is higher in young women with relative recent cholecystectomy. A complete preoperative evaluation is essential for decreasing PCS, because patients can present precocious/later postsurgical, the reappearance of symptomatology.

7. A CORRELATION BETWEEN OVARIAN HYPERANDROGENISM AND HYPERINSULINEMIA IN POLYCYSTIC OVARY SYNDROME

Pinelopi TOPALIDOU M.D.

Summary

Hyperinsulinemia, consequence of insulin resistance, is considered to be a major element of the endocrine disturbances of PCOS. It may represent a main component of the pathogenesis of this syndrome. In the same time, it induces several effects that we included in its specifically vicious physiopathologic circle: stimulates ovarian and androgen secretion, reduces hepatic production of SHBG with an increase of serum free androgens and augments pituitary secretion of LH.

Starting from these data, we studied 54 women diagnosed with PCOS, divided in 2 groups: one group of 26 women with normal weight ($BMI < 25$) and a second group of 28 obese women ($BMI > 25$).

Hyperinsulinemia - defined as a high serum level of fasting insulin and a high insulinemia response to OGTT - was present in 33 patients (61,1% of all patients), its prevalence being significantly higher in the obese group compared to the normoponderal one (78,5% and 42,3%, respectively).

The hyperinsulinemia patients were significantly differentiated from the normoinsulinemic women in clinic, endocrine and echographic aspects.

The incidence and severity of the clinical signs of hyperandrogenism (hirsutism, acne, seborrhea, male-pattern alopecia) showed positive correlation with the degree of hyperinsulinemia and BMI.

We also found a positive correlation between circulating concentration of insulin and serum free testosterone, as well as the ovarian volume, ultrasonographically evaluated. Serum insulin correlated negatively with serum LH and SHBG.

8. INTERCONNECTIONS INTO THE CARDIOPULMONARY PATHOLOGY – THE CORONARY DISEASE AND SERIOUS PULMONARY DISEASE – CASE REPORT

Mirela-Maria Coroescu M.D., Lecturer Silvestru Constantin M.D., Alexandra Constantin, student

Summary

The present paper intends to present a case of serious coronary disease for a 67 year old male, who was found out at the radiographic screening examination with a tumoral pulmonary formation.

The emergence of a grave pulmonary disease thoroughly changes the therapeutic protocol of a cardiovascular patient. The imaging examination established diagnosis, the stage of therapeutic protocol and prognosis.

HALL A

Friday, 10.11.2006 - 11³⁰-13³⁰

Moderatori / Chairs:

Conf.univ.psih. POPA MARIAN

Psih. MANEA TRAIAN

1. THE PSYCHOSOCIAL MOTIVATION OF THE AERONAUTICAL PERSONNEL

Psih. Traian Manea, Ph.D.

Summary

Introduction. Motives are internal mobiles of our behavior. Their role is to activate, sustain and orientate the conduit. Researches have found a large number of motives.

Objective. The main aim of the study was to release a questionnaire measuring psychosocial motivation.

Subjects: In this study 97 subjects participated.

Method. We used a questionnaire with 20 items referring to the desire to participate or to implicate in activity. Our subjects marked the right answer on a 5 foot Lickert scale (1-totally disaccord, 5-totally accord).

Results. Statistical analyze show a relative normal distribution of the results; internal consistency is satisfactory; there are correlations between motivation and personality traits (self confidence, aggressiveness, organization, impulsiveness, risk acceptance).

Conclusions. The questionnaire seems to be useful in investigation of psychosocial motivation. Next step is to increase the number of subjects and to differentiate them into professional activity.

Key words: motivation, questionnaire, personality traits, risk acceptance.

2. FLIGHT SAFETY ATTITUDE SCALE

Violeta Ionescu

Summary

Introduction: The study is concerned on aeronautical safety culture from an individual point of view.

Objective: A scale was designed for attitude aviation safety assessment

Material and method: 784 military and civil pilots were assessed. The scale are 25 items and responses to each item are measured on 5-point Lickert scale (1 = strongly agree, 5 = strongly disagree). It calculates an attitude aviation safety index and obtained high scores means positive safety attitude.

Results: Cronbach alpha is 0.75. Statistical analyze show a relative normal distribution of the results. Internal validity was assessed with personality inventories: ALAPS, EPI, STRES, LOCUS and it results a high number of significant correlations with those scales and global score.

3. MYERS-BRIGGS TYPE INDICATOR – CONSIDERATIONS ABOUT AERONAUTICAL UTILIZATION

Psih. drd. Doina Trandafir, psih. drd. Violeta Ionescu, psih. Cezarina Rotaru, psih. Ioana Opreescu, psih. Samona Radu

Summary

Myers-Briggs Type Indicator is a personality questionnaire released by Katharine Briggs and Isabel Myers. This test is based on Jung's theory about the structure of personality and it's used to investigate normal subjects (it's not a clinical instrument). The questionnaire was first published in 1962.

Adjust the Jung's theory, there are 4 basic mental functions: (**T**-*thinking*, **F**-*feeling*, **S**-*sensing*, **N**-*intuiting*). These are named „functions for orientation”. Individuals have 4 ways to consider their relation with medium: **E**- *extroversion* and **I**-*introversion*, described by Jung and **J**- *judging* and **P**-*perceptual*, described by Myers and briggs. These are named „attitude”. All these are opposite and complementary functions.

By combining these factors we obtain 16 personality types and 4 temperaments: SJ (sensing and judging), SP (sensing and perceptual), NT (intuiting and thinking), NF (intuiting and feeling).

We consider in detail 1500 results of MBTI application for aeronautical profession, civil and military field. Internal consistency is acceptable. We found that Sensing scale obtained highest percent of all scales and SJ temperament is best represented for all category of subjects. The differences between professions and aeronautical functions were significant.

In conclusion, MBTI has a good consistency, a normal data distribution and shows the domination of some types and temperaments and significant differences between professional categories and military/civil occupations. The data revealed the utility of this instrument for the psychological professional selection.

4. THE METHOD OF WITHIN-SUBJECT STANDARDIZATION IN PERSONALITY SCALES ASSESSMENT

Marian Popa, Ion Puiu Vasilescu

Summary

Introduction. One of the usual methods for the personality scale scores assessment is standardization against a norm sample. The author proposes an original method based on intra-individual norm, by which every score of the scale is transformed using a central value of personal scores distribution. By this way every score will be charged with a special significance in relation with the personal profile.

Method and sample. The within-subject assessment model was applied on two personality scales: Valence Inventory AC-REF (B. Zörgö), (N=245) and Work Values Inventory (D.E. Super), (N=4084), comparing psychometrical characteristics of within-subject standardization with those of the initial scores.

Results and conclusions. The data show significant improvements of scores configuration and also of the predictive validity. Theoretical significance of the method and recommendations for use are discussed.

5. REACTION TIME IN CONFLICTING DECISION

Marian Popa, Traian Manea, Violeta Ionescu, Doina Trandafir, Cezarina Rotaru, Ioana Opreescu, Samona Radu

Summary

Background. Reaction time is an essential component of human behavior in environmental adjusting situations. It is composed from detection time, mental interpretation and motor response for a certain stimulus. Studies dedicated to this subject, covers a large variety of situation and conditions. Our

study is based on a research design dedicated to assess the reaction time difference between conflicting and non-conflicting decision.

Method. The experimental design is based on Superlab module of Biopac system and consists in two conflicting stimuli (pressing the yellow key for a blue displayed stimulus, and the blue key for yellow stimulus) and one non-conflicting stimulus (pressing the red key for the red stimulus). The program is registering reaction time for each stimulus and number of errors. The participants were 50 volunteers subjects (age among 20-50).

Results. The preliminary assessment of the results, show a significant difference between conflicting decision reaction time compared with non-conflicting decision. The mean difference is about double for conflicting decision.

Conclusion. Our results are relevant, on the one way, for understanding the magnitude of impact of decision on time reaction, and, on the other way, for assessing the individual differences in decisional situations reaction time.

6. THEORETICAL CONSIDERATIONS ABOUT THE PRESTIMULUS RESPONSE

Stud. Cristian Georgescu

Summary

The prestimulus response is a relatively recent discovery, similar in some ways to precognition or intuition. The main difference between these phenomenon and the prestimulus response is that the first two cannot be conclusively proved and rely on indirect and questionable evidence. The existence of the prestimulus response (PSR) is certain.

The experiment has been repeated several times in laboratories around the world, using a series of dependent and independent variables.

The experimental model is a simple one.

A system made up of a random number generator, a stimulus generator and a measuring device that registers and stores the information regarding the measured physiological variable form the basis of the experiment.

The participants are informed about every aspect of the experiment. They are seated comfortably and connected to the measuring device.

Then the sequence is started and the participants are exposed to the random series of stimuli about neutral and exciting, while at the same time measuring the physiological variable.

The article treats the phenomenon of the pre-stimulus (PSR) response in relation to other so called parapsychological phenomenon.

Among the pioneering studies is an experiment conducted by Dean I. Radin on "presentiment". He used electro-dermal resistance as a dependent variable and used a series of images, some "calm", showing soothing sceneries or positive human expressions, others "violent" showing disturbing scenes.

Another study by the same author uses a similar methodology but uses three different physiological measurements: skin resistance, pulse, and the blood volume in the finger tips.

A more recent study done by S. JAMES P. SPOTTISWOODE and E. C. MAY used an auditory stimulus as an independent variable.

Bierman studies PSR in the University of Amsterdam and uses fMRI to produce more conclusive evidence and some interesting findings.

The number of studies and the attention given to the progressive elimination of all intermediate variables indicates that PSR is unquestionably real. Details regarding more subtle aspects of the phenomenon, such as interindividual differences, what determines PSR to be more or less developed, and understanding the mechanism that makes the phenomenon possible remain unknowns that await to be studied.

HALL B

Friday, 10.11.2006 – 9⁰⁰-11⁰⁰

Moderatori / Chairs:

Lt.col.dr. HRISTEA RĂSVAN

Col.(r) dr. CAPANU ILIE

1. THE INFLUENCE OF THE VARIATION OF SOME BIOLOGICAL MARKERS ON THE HYPOXIA RESISTENCE EVALUATED BY PULSOXYMETRY

Ilie Capanu M.D., Assoc.prof.Marian Macri M.D., Ph.D., Simona Berbecar M.D., Ph.D., Ileana Doina Lupeș M.D., Eugen Necula M.D., Angelica Raicu, nurse, Ioachim Babiță, eng., Corneliu Uță, nurse, Paris Revithis, student IV, George-Virgil Focșănianu, student IV

Summary

The evaluation of the resistance and the training by hypobaric-hypoxia still remains a compulsory method in the selection and examination of the flying personnel.

Performing electrocardiogram and pulse oxymetry tests with the help of the specialized modules from the BIOPAC computer-based data acquisition system, provide relevant information for evaluation of the the subject's adaptative responses exposed to hypoxic stress.

In this study we evaluate the means in which the variation of some biological markers can influence the blood saturation level in oxygen in periferic arterial system during the „simulated flight”.

2. THE LINK BETWEEN THE DATA PROVIDED BY PLETHYSMOGRAPHY AND SOME BIOLOGICAL MARKERS IN HYPOBARIC-HYPOXIA STRESS EXPOSURE

Assoc.prof.Marian Macri M.D., Ph.D., Ilie Capanu M.D., Eugen Necula M.D., Ileana Doina Lupeș M.D., Angelica Raicu, nurse, Ion Nicoară, eng., Corneliu Uță, nurse, Paris Revithis, student IV, George-Virgil Focșănianu, student IV

Summary

The existence of the specialized computer-based data acquisition system, BIOPAC, allowed us to create a database for a better selection, periodic examination and flying personnel training through a dynamic evaluation of the tested subjects.

Linking the information from the pulse wave recorded with the plethysmography module along with the ECG readings and the level of some biologic markers.

The influence of the biological markers on the information from the pulse wave, recorded with the plethysmography module along with the ECG readings provided us the possibility of a better evaluation of the adaptative response to hypobaric-hypoxia in case of „simulated flight”.

3. SPATIAL DISORIENTATION IN UNMANNED AERIAL VEHICLES

Adrian Macovei M.D., Dragoș Vlad M.D., Cdr.av.(r) Ion Tecuceanu

Summary

Purpose: a review of current problems regarding SD in UAV and the implementation of an experimental model to duplicate the disorienting conditions.

Materials and methods: we attempted to duplicate the spatial disorientation of UAV pilots when the control base is airborne. GAT II device and Microsoft Flight Simulator (MSFS) are used for replicate the motion environment and respectively the UAV. Performances of both pilots and non pilots have been analyzed.

We found that the control of UAV could be significantly impaired by certain motion patterns of control base. Then we tried to establish the place of our findings in current SD in UAV paradigm.

Conclusion: the removal of the pilot from the cockpit does not completely eliminate the SD issue. New approaches for research and development might be necessary.

4. EVALUATION OF SOME AEROSPATIAL ENVIRONMENT SIMULATED FACTORS EFFECT UPON BOTH THE IMMUNE SYSTEM AND THE HUMAN ORGANISMS HOMEOSTASIS

Bioch.Daniela Apafaian¹, Simona Berbecar M.D., Ph.D.¹, Bioch. Anca Grigorescu¹, Ilie Capanu M.D.¹, Assoc.prof. Marian Macri M.D., Ph.D.¹, Raduica Constantin M.D.¹, Gheorghe Simionca M.D.², Herminia Pasaila, nurse¹, Angelica Raicu, nurse¹

1 National Institute of Aerospace Medicine

2 National Institute of Rehabilitation, Physical Medicine and Balneoclimatology,

Summary

This article present an interim result of an INMAS project realized in collaboration with National Institute of Recuperation, Physical Medicine and Balneal-climatology.

Objective: The evaluation of the pressure and temperature variations to immunological system, oxide-reduction process, hydro-electrical system, stress' hormones action to human body and urinary elimination of unmoral markers, as a response to hypoxic-hypobaric stress.

This study was carried out over the period 10.12.2005-12.04.2006 to 62 human subjects that have been tested in hypobaric bar camera in INMAS. The study lot was selected from navigation personnel trained to hypoxic-hypobaric stress (48 subjects). Witness lot: consisted of 14 candidates all aero-navigate personnel, with no experience in hypoxic-hypobaric conditions.

In INMAS' Clinical Laboratory, all subjects were biochemical investigated and urinal samples were prevailed from them before and after exposure to hypoxic-hypobaric stress. It was noticed: modifications of full blood count and leukocytes formula, IgA, IgG, IgM, serum level of cortisol and full urinal exam. All the results were compared after exposure with ones done before tested in bar-camera.

After exposure was noticed that approx 50% of subjects showed an increased number of leucocytes and plackets. Appreciatively 60% of the subjects showed decreased number of erythrocytes, hemoglobin's, hematocrit and medium cells volume. The variations of leukocytes formula were as follow: 60% of study lot shown increased number of neutrophiles, 34% shown increased number of basophiles, 53% of lymphocytes, while the eozinophylia dropped by 68% and monocytes by 87%. It was noticed of a general decrease of IgA, IgG, IgM and of C3, C4. The level of serum cortisol decreased to a percent of 71% from the subjects exposed to hypoxic-hypobaric stress. The urinary density decreased to 69% of subjects and the pH rose up to 68% from all subjects, showing a tender to alkaline urine.

5. THE PARAMETERS OF WISTAR RATS IMMUNE SYSTEM IN AN ARTIFICIAL AEROSPACE ENVIRONMENT

Simionca I. (Ghe.)¹, Hoteteu M.¹, Berbecar Simona², Apafaian Daniela², Grigorescu Anca², Macri M.², Răduica C.², Rogojan Rodica¹, Enache L.^{1,3}, Petec Calin Ghe.¹

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Summary

The paper show the results of a study performed on the influence of a complex aerospace simulated environmental factors on the immune system of Wistar rats. Actual study permit to establish the changes in PMN phagocytosis and lymphocytes populations and subpopulations after exposure of rats to radiations, hipobaric hypoxia, high temperature and microbiological risk in condition of hipergravity or simulated microgravity.

The study was performed on Wistar white rats divided in experimental and control groups. Hipergravity was obtained by centrifugation of rats at +8Gz for 30 minutes and microgravity was simulated by 24 hours water immersion. The influence of gamma radiation on studied processes was obtained by animal irradiation with a single dose of 1,5 Gy. The studied air pressure and temperature was 300 mmHg and +45°C. The microbiological risk was obtained by rats autoinfection with Staph. aureus from respiratory tract using a chemical permeabilisation of nasal mucous membrane. The artificial aerospace environmental factors and gravitational variations determine a decrease of unspecified resistance of rats organism, increase of autoinfection and immunopathological disturbances of lymphocytes population. Also, the studied factors induce some disfunctions of the hydroelectrolytic balance and cortisol level.

6. THE INVESTIGATION OF THE VESTIBULAR SYSTEM ON AERONAUTICAL PERSONNEL – Methodology and clinics

Adrian Tudor M.D., Cristina Dolinschi M.D., Maria Balasa M.D.

Summary

Balance is one of the oldest senses. Sure it appears before hearing and sight, possible before taste and smell. In natural conditions is an unconscious phenomenon.

When the information received by the cortex is incoherence, it appears an error signal which will lead to vertigo.

In this paper are presented the main part of the clinical and paraclinical procedures performed for tracing the peripheral vertigo.

In our institute the investigation of vestibular system begin with a detailed patient history of the beginning of symptoms, than an audiogram, acoustic immittance measurements, dynamic posturography, rotatory probe- Barany, and finale electonystagmography.

Every probe is presented in detail with its recommendation and two clinical cases of vestibular pathology.

7. COMPARATIVE STUDY OF DYNAMIC BALANCE IN FALLERS AND NON FALLERS USING DYNAMIC POSTUROGRAPHY

Maria Balasa, M.D., Cristina Dolinschi M.D., Adrian Tudor M.D.

Summary

OBJECTIVE: Postural instability and falls are common reasons for physician visits among many patients. Our objective was to identify posturography parameters that are relevant for evaluating postural stability and for identifying individuals at high risk of falls.

MATERIAL AND METHODS: The SYNAPSYS platform is one of the innovating devices allowing assessment of performance and providing more discriminatory factors to describe static and dynamic equilibrium in the normal and pathological subjects. It is also possible with this technique to identify the system(s) responsible for dysfunction of the equilibrium. During the same investigation we can identify the various sensorial afferences (visual, vestibular, somesthetic) involved in postural control, by order of importance.

In our study, dynamic posture was evaluated using SPS platform (SYNAPSYS) in 59 patients with age between 20-65 years.

RESULTS: Postural adjustments and voluntary movements were altered in the fallers, compared with non fallers

8. THE IMPORTANCE OF 24-HOUR ECG HOLTER RECORDING IN AERONAUTICAL PERSONNEL: THE ROLE OF HEART RATE VARIABILITY IN RISK STRATIFICATION OF HYPERTENSIVE SUBJECTS WITH OR WITHOUT LEFT VENTRICULAR HYPERTROPHY (CLINICAL STUDY)

Mirela Anghel M.D., Ph.D

Summary

The 24-hour ECG Holter recording is an important investigation method used in assessment of arrhythmias in the aeronautical personnel at the National Institute of Aeronautical and Space Medicine, as previous studies have shown. Furthermore, ambulatory ECG monitoring, a complex cardiac investigation, could be useful in risk stratification of hypertensive subjects by analysis of the **heart rate variability (HRV)**. HRV is an important parameter describing autonomic cardiovascular system. Reduced HRV is a marker of poor prognosis in different populations, due to its association with increased risk of coronary events.

Previous studies of HRV in hypertensive patients have yielded conflicting results in specialty literature. Moreover, these studies in aeronautical personnel have not yet been carried out. The aim of this study was to evaluate the relationship among HRV, cardiovascular risk factors and arterial hypertension and to investigate whether HRV patterns are different in hypertensive subjects with or without left ventricular hypertrophy. All studied subjects belong to the aeronautical personnel, a distinct category with specific professional stress. This study represents a more complex approach of a previous published study.

As a preliminary conclusion, HRV analysis by 24-hour ECG Holter should be considered in risk stratification of hypertensive subjects with left ventricular hypertrophy. Measurement of HRV by ambulatory ECG Holter recording offers unique prognostic information beyond that provided by the evaluation of traditional risk factors in hypertensive subjects, especially in the aeronautical personnel. In this category, a very efficient cardiovascular prevention is very important.

HALL B

Friday, 10.11.2006 – 11³⁰-13³⁰

Moderatori / Chairs:

Lt.col.dr. BERBECAR SIMONA

Șef de lucrări, Col.dr. CONSTANTIN SILVESTRU

1. MICROBIAL AGENTS IDENTIFIED IN THE CLINICAL LABORATORY OF INMAS WITH THE AUTOMATIC MICROBIOLOGY ANALYSER VITEK 2 COMPACT

Simona Berbecar M.D., Ph. D., Simona Berar M.D., Assoc. Prof. Marian Macri M.D., Ph.D., Daniela Neagu, nurse, Herminia Pasaila, nurse

Key words: automatic analyser VITEK 2, microbial agents' identification

Summary

Objectives: At the beginning of this year, in the Clinical Laboratory of INMAS, the microbiology department, there was acquired the automatic microbiology analyser VITEK 2 COMPACT. This can process 60 samples simultaneously, performing both the precise identification of the microbial species and subspecies (gram positive and negative germs and fungi) and the antibiotic susceptibility testing, by establishing the minimal inhibitory concentration (MIC).

Material and method: between January-September 2006, there were processed samples from 77 patients (32 urine samples and 45 different other samples such as pharynx and nasal exudates, sputa, ear and eye secretions, vaginal secretions, cultures of faeces, wound secretions, water samples). There were performed identifications of the germs, which were isolated as a pure culture from the samples, and for some of them there were done antibiotic susceptibility tests with the specific cards for every germ category.

Results: there were identified 29 gram negative germs which belong to the genera: *Escherichia*, *Enterobacter*, *Klebsiella*, *Proteus*, *Morganella*, *Bordetella*, *Oligella*, *Pseudomonas*, *Stenotrophomonas*, *Aeromonas*, *Shingomonas* and *Chromobacterium*.

The isolated gram positive germs were 38 in number and were represented by staphylococci, streptococci, enterococci, *Kocuria*, *Gemella*.

The VITEK 2 COMPACT analyser also identifies fungi, there were identified in the same period of time 6 fungi from the genera *Candida* and *Stephanoascus*.

Conclusions: the automatic microbiology analyser VITEK 2 COMPACT allows the rapid (starting from 4 hours for some usual germs such as *E. coli*) and precise (until the species and subspecies level) identification of the microbial agents, which were isolated from different biological samples.

2. LEGIONNAIRES' DISEASE INFECTION SOURCES – POSSIBLE IMPLICATIONS IN BIOTERRORISM

Simona Berbecar M.D., Ph.D., Assoc.prof.Marian Macri M.D., Ph.D.

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Summary

Following the 1976 epidemics which occurred in a Philadelphia Hotel Complex on the occasion of the American Legion Congress attended by 4500 participants, Legionnaires' disease dramatically focused the attention of medical world. As a matter of fact, that episode was initially highly suspected to represent a bioterrorist action. A lot of legionellosis episodes were noted since then in the world, the infection occurring as a result of technical progress recorded in the tourism industry and being often in strong connection with traveling.

The natural and artificial infection sources have an important contribution in disease occurrence. Especially artificial infection sources are involved in community-acquired legionellosis, as well as in traveling and in nosocomial legionellosis: air acclimatization and air conditioning installations, warm water supply systems, Jacuzzi bath tubs, artesian wells, water sprinklers used in the vegetable markets, etc.. It was also noted that traveling by plane may act as a risk factor in disease occurrence.

Legionella pneumophila fulfils many of the requirements for an ideal biological warfare agent: availability or ease of production in sufficient quantity; the ability to cause incapacitating effects in humans at doses that are achievable and deliverable; appropriate particle size in aerosol; ease of dissemination; stability (while maintaining or even increasing virulence) in the environment.

3. VIRAL TUMOURS IN E.N.T. PATHOLOGY

Assoc. Prof. C.Romanitan M.D, Cristina Dolinschi M.D., Maria Balasa M.D., A. Tudor M.D, R. Costin M.D., A. Ilie M.D.

Summary

Viral tumours are common lesions in ENT pathology, but they are also identified in stomatology, dermatology, gynecology.

Human papillomavirus can cause oral benign lesions (warts, papillomas) and are certainly implied in etiology of cervical cancers. Epstein-Barr virus and Herpetic virus type 8 are detected in many clinical disorders such lymphomas, Kaposi sarcoma. In this study the authors present the most important viral tumours in E.N.T. pathology, diagnosis and medical management.

4. RESISTANCE PHENOTYPES TO ANTIBIOTICS IDENTIFIED WITH THE VITEK 2 COMPACT AUTOMATIC MICROBIOLOGY ANALYSER

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Key words: automatic analyser VITEK2, resistance phenotypes, antibiotics

Summary

Objectives: One can perform the antibiotic susceptibility testing both with qualitative methods (the diffusimetric one) and mainly with quantitative methods (the minimal inhibitory concentration calculus: MIC), which are preferred because of their therapeutic precision, their possibility of standardisation and their use on a much greater scale of germs.

At the beginning of this year, in the Clinical Laboratory of INMAS, the microbiology department, there was brought and used the automatic microbiology analyser VITEK 2 COMPACT. This can perform 60 samples simultaneously, and it can perform both the precise identification of the microbial species and subspecies (gram positive and negative germs, and also fungi) and the antibiotic susceptibility testing using the MIC method.

Material and method: between January-September 2006, there were processed samples from 77 patients (32 urine samples and 45 different other samples such as pharynx and nasal exudates, sputa, ear and eye secretions, vaginal secretions, cultures of faeces, wound secretions, water samples). There were performed identifications of the germs, which were isolated as a pure culture from the samples, and for some of them there were done antibiotic susceptibility tests with the specific cards for every germ category (AST NO17, AST NO41, AST NO22, AST P535, AST P533).

Results: With the cards for antibiotic susceptibility testing AST P535 there were performed 15 tests of the antibiotic resistance for staphylococci, group B streptococci and enterococci, in the same time there was confirmed the presence or the absence of the beta lactamases. We obtained results for the 22 antibiotics contained by this type of card.

Streptococcus pneumoniae (one case from a nasal exudate, in pure culture) was tested with the AST P533 card, which contains 19 antibiotics.

The gram negative germs (24) were tested on the other three types of cards, with the observation that the AST NO22 card contains antibiotics which are active on the *Pseudomonas* genera and the AST NO41 card can also detect and confirm the presence of the extended spectrum beta lactamases (ESBL). All the three types of cards contain 18-20 antibiotics.

Conclusions: VITEK 2 COMPACT is an automatic system of high performance that identifies and assays the antibiotic susceptibility of different kinds of germs, from various biological samples, by the MIC method, in accordance with the CLSI standards. Through visual and acoustic alarm, it allows the user to know the unusual patterns of antibiotic resistance of the tested bacterial species. It also reports the specific resistance mechanisms of the tested bacterial strains (such as ESBL, penicillinases). The expert advanced program (AES) that is integrated in the system allows the validation of the results, the therapeutic interpretation and comments regarding the therapeutic options.

5. CLINICO-RADIOLOGICAL ASPECTS IN CORONO-RADICULAR FRACTURES

Lecturer Silvestru Constantin M.D., Marinela Tonea M.D., Consuela Ghiuță M.D., Anișoara Hagi M.D., Floriana Tudorache M.D.

Any posttraumatic odontal lesion is considered an emergency and has to be therapeutically treated, as a lesion with major risk for the vitality and even existence of the tooth involved.

The affection by coronary fracture of a single front tooth can have phisionomical, functional and chewing function implications of major importance for the patient.

The diagnosis results from linking the dates obtained by objective clinical examination and radiological exam.

The radiological exam is the most relevant diagnosis paraclinical method from the point of view of the information it brings to establish the diagnosis, the indications for conservative or radical

treatment, of the accuracy of the treatment and to see if the treatment was right through a series of X-rays, utilizing the same incidence, the same conditions and the same execution technique.

6. IMAGING CRITERIA IN THE POZITIV DIAGNOSIS VOF BONE CYSTS OF THE VISCEROCRANIUM

Assistant Lecturer Anișoara Hagi M.D., Assistant Lecturer Tonea Marinela M.D., Assistant Lecturer Anca Elefterescu M.D., Consuela Ghiuță M.D., Lecturer Constantin Silvestru M.D.

Summary

They represent a heterogenous group of endosseous hollow formations, most of which are lined by an epithelial membrane, and with a fluid, semi-solid, or gaseous content (Kramer, 1974).

They are caused by the existence of the epithelial tissue within the of the substantia spongiosa of the maxilla, a fact that substantia spongiosa of the maxilla, a fact that distinguish them from cystic formations within other bones forming the human skeleton (Bulibașa, 1998).

Aim. The study had set the goal to establish clinical, anatomical, pathological and imaging corelations of the cysts of viscerocranium.

Matherial and method. A series of 74 cases of inpatiens of the "Dan Theodorescu" Clinical Hospital, Oromaxillofacial surgery Clinic were studied. All cases were assessed clinically, by imaging methods and pathoanatomically.

Results. Among the odontogenic cysts, keratinous cysts represent 10%, pericoronal cysts 9%, among the non-odontogenic cysts: residual cysts represent 3-13%, radicular cysts, 65%, and nasopalatal cysts, 1,23%.

Conclusions. Imaging assessment is highly accurate in the positive diagnosis, allows surgeon choose the correct approach, and helps in the postoperative follow-up of the patient.

7. THE CLINICAL-RADIOLOGICAL DIAGNOSIS IN THE CASE OF PROFUND MARGINAL CHRONIC PERIODONTITIS IN ADULTS

Florina Tudorache M.D., Assistant Lecturer Anișoara Hagi M.D., Assistant Lecturer Tonea Marinela M.D., Consuela Ghiuță M.D., Lecturer Constantin Silvestru M.D.

Summary

Parodontal affections are not only a stomatological problem, but also a general and social problem, because of the fact that it is very widespread in the world, and the number of extracted teeth due to this affection is much bigger than those lost because of complications in dental decay.

At the same time, the inflamatory lesion of the periodontium has a negative impact on the whole body because it installs infections.

The clinical form of the affection and later development of paradontal lesions is a result of the relation between the level of bacterial pathogenity of microorganisms from the bacterial plaque and the level of defence of the host-tissue, influenced by multiple local and general factors.

The radiological examination is important in diagnosis establishment because it offers information regarding: global form of the tooth; tooth implantation; the form, dimension and structure of different pathological lesions; the neighbourhood report of the teeth with anatomical elements.

The radiological investigation most often used is th periapical x-ray, because it offers potential detailed information and it is surely connected to tooth pathology and periodontium.

8. IMAGING DIAGNOSIS OF AORTIC DISSECTION AT THE MARFAN SYNDROME

Lecturer Silvestru Constantin M.D., Mirela-Maria Coroescu M.D., Alexandra Constantin student

Summary

The **Marfan** syndrome – genetic disease, with the same frequency for male and women – clinically affects the skeleton, the eyes and the cardiovascular system. For the cardiovascular system

disease, the biggest problems are owed to ascending aorta dilatation, which, for any clinical state, at a 60 mm dilatation, needs surgical treatment.

CT diagnosis with *mdc* of the aortic dissection has 100% specificity and about 85% sensitiveness, isn't invasive and the new MSCT techniques allow three-dimensional (3D) visualization of the aorta.

9. ROLE OF TRAVEL MEDICINE IN PREVENTING SEXUALLY TRANSMITTED DISEASES (STD)

Simona BERBECAR M.D., Ph.D.

Summary

It is estimated that at a world-wide level a number of over 350 million people become annually infected with a sexually transmitted diseases (STD), the most frequent being: syphilis, genital herpes, gonorrhea, Chlamydia infection, HIV infection, B and C viral hepatitis. These infections represent an important factor inducing sterility, diseases and mortality, with important consequences, both medical and psychological, affecting men, women and children.

As STD are defined by transmission from one individual to the other, during sexual intercourse, the travels – due to creation of opportunities to initiate new contacts - may facilitate STD in several ways. Certain travelers do not abandon a risky behavior in the above mentioned sense, or regard a travel as an opportunity to exhibit such a behavior. A considerable increase in international travels was noted during the last years, their destinations also including STD endemic areas.

Importance of traveler's individual behavior is discussed in connection with STD acquiring, alongside with the role of sexual tourism.