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1. EXPERIMENTAL STUDY CONSIDERING THE INFLUENCE OF HYPERSODIC DIET OVER THE HOMEOSTASIS OF THE CALCEMIA, MAGNESEMIA AND PHOSPHOREMIA

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ABSTRACT

We convey the results of a complex study performed on animals (Guinea pigs), regarding calcemia, magnesemia and phosphoremia homeostasis, the most abundant ions in the body and highly important for triggering, coordination and development of some intra and extracellular processes, some of them of vital importance. It has been found that animals, which had a hypersodic food intake for a month, have shown alterations of the calcemia, magnesemia and phosphoremia.

The results imply the possibility of the existence of new ionic inter-relations that are to be taken into account when studying the ionic homeostasis, both in physiological states as in various pathological conditions.

Key words: hypersodic food intake, calcemia, magnesemia, phosphoremia, homeostasis

2. MULTIDRUG-RESISTANT GERMS ISOLATED FROM INTENSIVE CARE UNITS

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ABSTRACT

The aim of our study was to determine the prevalence of multi-drug resistant germs isolated from patients hospitalized in Intensive Care Units (ICU) and their resistance to antimicrobials.

From 209 samples, collected during a period of 4 month we isolated 195 microbial strains with nosocomial potential. 48.71% from these strains were represented by enterobacteria (*Klebsiella* spp., *E.coli*, *Serratia marcescens*, *Enterobacter cloacae*), from which, 34.73% (33 strains) were Extended Spectrum Beta Lactamase (ESBL) producers (*Klebsiella pneumoniae*, *Enterobacter cloacae*, *Serratia* spp., *Citrobacter freundii*, *Morganella* spp.). Gram-positive cocci have been represented by *S.aureus* and *Enterococcus* spp., and Gram-negative non-fermentative rods by *Acinetobacter baumannii*, *Pseudomonas aeruginosa* and *Stenotrophomonas maltophilia* strains. Other 3 strains of *Pseudomonas aeruginosa* had the same ESBL resistance phenotype. The majorities of these strains has been isolated from broncholveolar liquids, wound secretions, urines and were involved in respiratory tract, surgical site and urinary tract nosocomial infections (NI).

The costs of management of multi-drug resistant germs, and also of NI produced by them are huge and include patient morbidity and mortality, hospital and community medical costs, the impact of blocked beds, and wider economic costs. Investment in infection control is therefore highly cost effective.

Key words: Meticillin resistant S.aureus, Extended spectrum beta lactamase producing bacteria, K.pneumoniae, E.coli, Pseudomonas spp.

3. COMPLICATIONS PARTICULARITIES FOUND IN HODGKIN'S LYMPHOMA EVOLUTION

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ABSTRACT

Introduction. Most Hodgkin's lymphoma patients died more frequently due to complications, especially the second neoplasia than lymphoma itself.

Material and Methods. We studied 217 patients diagnosticated with Hodgkin's lymphoma and hospitalized in Hematology Department of City Hospital, Timisoara. Their evolution was followed between January 1984 and June 2004.

Results and Discussions. In our group of patients found a prevalence of hematological complications characterized by pancytopenia due to chemotherapy and radiotherapy. The immune response is altered due to leucopenia and that's why we found a large number of urinary infections, pharyngitis, tonsillitis and vaginitis with Candida. This altered immune response can promote, besides therapy modification, the second neoplasia, which was the first cause of dead after ten years. The second neoplasia high frequency can due to a large number of elderly patients who have a malignant pathology much more than younger patients.

Conclusions. Hematological complications can be a promoting factor for many diseases especially for infectious diseases and the second neoplasia. Moreover, any new complication can hide the lesions spreading to an advanced stage.

Key word: Hodgkin's lymphoma, complications, antitumoral therapy

4. CORRELATION BETWEEN THE CONCENTRATION OF GLYCOSYLATED HEMOGLOBIN AND OXIDATIVE STRESS IN DIABETES MELLITUS TYPE 2

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ABSTRACT

Aims: Chronic hyperglycemia is associated both with the increase of glycosylated hemoglobin concentration, and the level of lipoperoxids, a parallelism between these two parameters existing. The purpose of this study is to establish the correlation between the concentration of glycosylated hemoglobin (HbA_{1c}) and malondialdehyde, the latest parameter could be used as a biomarker of the quality of the glycemic control, together with HbA_{1c}. **Methods:** The study was performed on two groups of subjects (a study group and a control group). The experimental group included 21 patients with Diabetes Mellitus (DM) type 2 insulin – dependent (76.2%) and non insulin-dependent (23.8%), age between 48 and 77 years (M = 62.9 ± 8.90 years), having a mean duration of DM of 7.74 ± 5.34 years, to whom the blood concentration of glucose, cholesterol, triglycerides, uric acid, glycosylated hemoglobin, malondialdehyde and ceruloplasmin were established. The same substances were measured for the control group of 10 healthy blood donors. **Results:** We obtained a significant increased level of glycemia and triglycerides for the study group compared to the control group (p < 0.001). Also the concentration of glycosylated hemoglobin and malondialdehyde was significantly increased by comparison with the control group (p < 0.001). The level of cholesterol and uric acid were not significantly increased. Between the concentration of glycosylated hemoglobin and malondialdehyde, at one hand, and between that of malondialdehyde and triglycerides, on the other hand, there was a significant positive correlation (r = 0.72, r = 0.56, p < 0.001). **Conclusions:** These results demonstrated that there was a positive correlation between the values of glycosylated hemoglobin and the level of oxidative stress. Malondialdehyde could be used as a marker which appreciates the quality of glycemic control in subjects with DM type 2, where assessment of HbA_{1c} is irrelevant.

Keywords: diabetes mellitus type 2, oxidative stress, glycosylated hemoglobin, malondialdehyde

5. ASSESSMENT OF OXIDATIVE STATUS IN MORBIDLY OBESE PATIENTS SUBMITTED TO BARIATRIC SURGERY

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ABSTRACT

Background. Obesity represents a major health problem worldwide. In patients with morbid obesity (Body mass index BMI ≥ 40 Kg/m²) the only efficient method for weight reduction and maintenance consists in bariatric surgery. Several studies in humans have shown an obvious direct correlation between oxidative stress markers and the severity of obesity. These findings suggest that oxidative stress and associated cellular damage may be particularly high in the morbidly obese. The aims of the study were (1) to demonstrate the presence of high oxidative stress in morbidly obese patients without co-

morbidities and (2) the effect of significant early postoperative weight loss (3 months) on the serum level parameters of oxidative stress, as well as on serum antioxidant capacity which includes ascorbic acid, alpha-tocopherol, beta-carotene, and reduced glutathione. **Material and methods.** Twenty morbidly obese patients (BMI $48.06 \pm 8.54 \text{ kg/m}^2$), without co-morbidities, were selected for the study. All these patients underwent silastic ring vertical gastropasty. Serum lipid peroxides (LP) using Satoh method, free malondialdehyde (MDA) using Esterbauer method and hydrogen donating capacity of serum (HDC) using Janazewska method were determined before and three months after the surgical intervention. The same parameters were determined in a control group of twenty normal weight, healthy subjects. **Results.** During the first 3 months postoperatively, patients had a significant weight loss from BMI of $48.06 \pm 8.54 \text{ kg/m}^2$ to $39.19 \pm 6.39 \text{ kg/m}^2$ ($p < 0.0005$). LP serum values were $2.74 \pm 0.52 \text{ nmol/ml}$ and free MDA were $1.83 \pm 0.62 \text{ nmol/ml}$ in morbidly obese patients, higher in comparison with the control group in which PL serum values were $1.29 \pm 0.37 \text{ nmol/ml}$ ($p < 0.005$) and free MDA were $1.02 \pm 0.27 \text{ nmol/ml}$ ($p < 0.005$). HDC value was $41.29 \pm 12.63\%$, lower vs. normal weight subjects ($46.6 \pm 6\%$). PL serum values decreased to $2.01 \pm 0.44 \text{ nmol/ml}$ ($p = 0.002$), and free MDA to $1.60 \pm 0.43 \text{ nmol/ml}$ ($p = 0.01$) three months after silastic ring vertical gastropasty. HDC increased postoperatively insignificantly though, to the value of $45.68 \pm 16.14\%$ ($p = 0.116$). **Conclusions.** Morbidly obese patients are exposed to an increased oxidative stress demonstrated through a high lipid peroxidation and a low antioxidant capacity. Weight loss associated with the reduction of caloric intake after silastic ring vertical gastropasty leads to significant decrease in oxidant production and slightly improves antioxidant defense.

Key words: morbid obesity, bariatric surgery, weight loss, lipid peroxides, antioxidant capacity.

6. TETRAPLEGIA DUE TO HYPOKALEMIA: CLINICAL PRESENTATION OF A PATIENT WITH GITELMAN SYNDROME

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ABSTRACT

Gitelman syndrome (GS) is an inherited autosomal recessive disorder characterized by hypokalemia, hypomagnesaemia, hypocalciuria, metabolic alkalosis. It is a rare disorder due to mutations of the gene encoding the thiazide-sensitive sodium-chloride cotransporter (SLC_{12A3}) on the short arm of chromosome 16 (16q13). Phenotypically it is generally considered as the mild variant of Bartter syndrome, as it is usually diagnosed in late childhood or adulthood and is often asymptomatic. However severely symptomatic patients have been reported. We describe a patient presenting with hypokaliemic tetraplegia, to our knowledge it is the first case-report of Gitelman syndrome in Romania, particular also because of the dramatic clinical presentation.

Keywords: Gitelman syndrome, hypokalemia, hypomagnesaemia, tetraplegia, inherited tubular disorder, distal Na/Cl cotransporter

7. ASYMPTOMATIC BACTERIURIA IN THE ELDERLY. WHAT ARE THE RISK FACTORS?

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ABSTRACT

Asymptomatic bacteriuria is characterized by more than 10^5 colony-forming units (CFU)/ml without clinical signs of urinary tract infection during the week preceding the time the urine sample was obtained. The prevalence of asymptomatic bacteriuria is over 20% in well elderly women in the community over 80 years, and 10% or more for men over age 80 years. Urinary incontinence, cystocoeles, obstructive uropathy (renal stones, enlargement of the prostate), diabetes, renal cysts, functional impairment are risk factors that predispose elderly men and women to bacteriuria.

Key words: asymptomatic bacteriuria, risk factors, elderly, urinary tract infection

8. EFFECTS OF ZOLPIDEM ON BLOOD GLUCOSE LEVEL AND SERUM LIPIDS IN DIABETIC RATS

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ABSTRACT

In male Wistar rats diabetes was induced by an intravenous administration of Streptozotocin (65 mg/kg, iv). The intraperitoneal injection of Zolpidem (1.25 – 2.5 - 5.0 - 10.0 and 15.0 mg/kg) repeated for five days, reduced blood glucose level and serum lipids. The mortality was also diminished.

Key words: rats, streptozotocin, diabetes, Zolpidem, blood glucose, serum lipids.

9. BOOK REVIEW: PSYCHOSOMATIC MEDICINE

Dan L. Dumitrascu

Ed. Medicală Universitară Iuliu Hațieganu, Cluj-Napoca 2007, 172 pages, 7 figures, 11 tables, 72 references, ISBN 978-973-693-210-6

The author of this volume is Dr. DL Dumitrascu, recently promoted Professor for Internal Medicine. Professor Dumitrascu is very active in the international scientific life by many contributions, some of them rewarded with prizes and grants. After a stage as physiologist Dr. Dumitrascu focused his activity on the study of functional gastrointestinal disturbances and generally on psychosomatic medicine.

The volume under discussion represents a development of an optional course on psychosomatic medicine proposed to students in the Third Medical Clinic of the University of Medicine and Pharmacy in Cluj-Napoca. Psychosomatics is a medical specialty which follows up to explain the etiology and pathogenesis of poorly understood conditions as rheumatoid arthritis, fibromialgia, depression, several gastrointestinal diseases (peptic ulcer, irritable bowel syndrome, functional dyspepsia), etc.

On a broader level psychosomatic explores the interaction between mind and body, exceeding the Cartesian dualistic vision, promotes the bio-psychosocial model and the translational concept based on the 2-way links of knowledge between bench and bedside. Therefore psychosomatic medicine is considered as a new paradigm for prophylaxis, treatment and recovery of a morbid process.

Although some skeptics consider that the goals of psychosomatic are too ambitious and the present-day evidences too uncertain the psychosomatic literature is very large. A compressive handbook has been edited recently by M Blumenfeld and I Strain.

In this topic, Prof. Dumitrascu has published the books “Functional digestive pathology” (1991, in Romanian language), “Neurogastroenterology” (2005, in collaboration with L Nedelcu) and edited “Psychosomatic medicine, Recent progress and current trends” comprising works of an International Symposium, held in Cluj-Napoca in 2003. He wrote chapters on psychosomatics in the Handbook of

Gastroenterology (Ed. M Grigorescu, in Romanian language, 2001) and papers in foreign scientific publications (for instance in the volume “Psychosomatic Medicine” by C Kubo and T Kuboki, 2006). In Romania, apart from the contributions of Dr. Dumitrascu, a valuable work has been performed by Professor I Bradu Iamandescu focused on psychological issues and behavioral medicine.

The recent book published by Professor Dumitrascu is divided in 19 chapters and has two parts; the first one examines the topic of general theoretical psychosomatics, the second focuses its attention on applied psychosomatics.

It is outside our intention to analyze in details this volume, but the content of its chapters is revealed by the titles, as follows: 1. Introduction to psychosomatic medicine; 2. Introductory definitions. 3. History of psychosomatic medicine. 4. Adjacent sciences. 5. Measurement tools for psychosomatic medicine. 6. Biomedical basis of psychosomatic medicine. 7. Quality of life. 8. Psychosocial factors. 9. Medical communication. 10. Models of disease. 11. Principles of psychotherapy (written by Doctor Cristina Pohribneac from Bad Kissingen, Germany). 12. Oncology diseases. 13. Cardiovascular diseases. 14. Respiratory diseases. 15. Metabolic diseases. 16. Digestive diseases. 17. Neurological diseases. 18. Dermatological diseases. 19. Other areas of pathology.

Information of physiological issues related to psychosomatics refers particularly to neuro-endocrine exploration and cerebral imagery, to mechanisms of pain and somatization and especially to stress. Stress – a concept with many practical clinical implications – is treated sometimes in details in several chapters, concerning the methods to evaluate stress, its categories, and the impact of stress and of the posttraumatic stress disorder in cancer, coping and emotions. For the readers interested in this area it would be useful if the text has been provided with a subject index.

Lengthways the book, the differences between the biomedical and the bio-psychosocial models of diseases are well explained, the illness behavior, somatization, importance of a close communication between physicians and patients are presented in their real shape. For psychosomatic treatments for obesity, diabetes, cancer and some other conditions are given reference points. A large chapter provides valuable data on the health and disease related quality of life from the tools used to its alterations in clinical pathology. It would have turned out useful to analyze also the psychosomatic topic along the lifespan from the childhood to the elderly.

Besides the undergraduate and graduate students this important book is of interest for a large audience of physicians, psychologists and academics working in life sciences.

Dr. Petru Derevenco
Academy of Medical Sciences

10. BOOK REVIEW: PRACTICE OF LABORATORY MEDICINE

Manole Cojocar

Ed. Cartea Universitară, București, 148 pages. ISBN 978-973-731-492-5, Published April 2007

In the past several years rapid advancement has occurred in the structure and role of clinical laboratory. Practice of laboratory medicine edited by a leading expert in the field presents the most appropriate up-to-date approaches required for modern clinical laboratory. This is written by the very dynamic and motivated vice-president of the Romanian Society of Laboratory Medicine, Manole Cojocar, from Bucharest with outstanding international reputation in his field of experience. Trainees in laboratory medicine in Romania have been in great need of a practical guide in their native language. A selective but relevant bibliography is attached at the end. Due to the style and format, the book will achieve its target to become a widely used academic book. At now we finally have a new comprehensive guide of laboratory medicine. This is a very useful book that should not be kept in a bookshelf but will certainly be very helpful if put on the laboratory bench.

Marian Negut