

1. NONINVASIVE MONITORING OF CARDIAC FUNCTION BY ELECTRIC BIOIMPEDANCE

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SUMMARY: Bioimpedance is a noninvasive method allowing hemodynamical monitoring of cardiac output both in normal and sick persons.

Our device allows monitoring a sum of hemodynamical parameters like heart rate, mean arterial pressure, stroke volume, pre-ejection period, time of ventricular ejection, cardiac output.

Our method of calculating those parameters by bioimpedance as well as comparison with other methods of estimating cardiac output is discussed.

Key words: Bioimpedance, hypoxia, effort, cardiac output, oxygen saturation.

2. TREATMENT OF OSTEOPOROSIS: THE GREAT ABSENT

Remus Glogojeanu M.D.

SUMMARY: Osteoporosis and the diseases of the osteoarticular system have significantly flourished lately due to the dramatic changes that have occurred in our diet, lifestyle, working conditions, as well as to the 'aging' phenomenon, characterized by a belief in high life expectancy. Consequently, it was considered necessary that the causal agents responsible for some diseases should be analyzed and a closer approach should be devoted to the mechanisms that generated these disorders, the way they developed, and the best means to prevent and treat them. Recent research has confirmed the necessity of a sufficient vitamin D supplement to be taken by patients, in addition to other therapeutic methods, which means that vitamin D has been 'the great absent' from the treatment programme usually followed by patients suffering from osteoporosis.

Key words: vitamin D, osteoporosis, prevention, treatment

3. SIGNIFICANCE OF NATRIURETIC PEPTIDES LEVEL IN CLINICAL PRACTICE; ARE THEY RELEVANT FOR SCREENING AERONAUTICAL PERSONNEL?

Mirela Anghel, M.D., Ph.D.

SUMMARY: Natriuretic peptides (NP) plasma levels (B-type natriuretic peptide – BNP and N-terminal proBNP – NT proBNP) are now widely used in clinical practice and cardiovascular research throughout the world and have been included into most national and international cardiovascular guidelines for heart failure. The role of NP levels in state-of-the-art clinical practice is evolving rapidly. Many people with substantial LV dysfunction do not have symptoms, but might be identified by a simple screening test such as BNP/NT-proBNP.

NPs are attractive candidates for screening the general population for sub-clinical cardiovascular disease for several reasons. First, LV dysfunction and the other cardiovascular diseases that are detectable by elevated NP levels are common and cause significant morbidity and mortality. Second, NP levels may be elevated early in the disease process, allowing for timely detection of disease prior to symptom onset. Thus, even small elevations of BNP levels may serve as an early warning sign in detection of cardiovascular disease. All this evidence might be relevant for screening aeronautical personnel with NPs?

Key words: natriuretic peptides, LV dysfunction, asymptomatic cardiovascular disease, aeronautical personnel.

4. MECHANISMS OF INVASION AND METASTASIS OF SQUAMOUS AND BASAL CELL CARCINOMAS: ROLE OF HYDROLASES

Carmen Boar M.D.

SUMMARY: The expression of proteases, in particular urokinase and the metalloproteinase by basal cell carcinoma and squamous cell carcinomas is a critical determinant of their basement membrane and interstitial extracellular matrix invasive capacities. In these cancers both the tumor cells and surrounding stromal elements (fibroblasts, eosinophilic granulocytes and other host cells) appear to be sources of these hydrolases. Studies will need to determine the mechanism by which these enzymes are over expressed. These investigations should concentrate on identifying the molecular mechanism and cellular lesions that underscore the elevated production of these proteases. Equally important is need for studies to determine the level of expression of collagenase inhibitor (TIMP-1 and TIMP-2) produced by these cells. The acquisition of such knowledge could ultimately lead to the development of novel treatments that inhibit the invasiveness of these tumors, thereby improving the quality of life and survival of patients afflicted with cutaneous malignancies.

Key words: basement membrane, extracellular matrix, hydrolases, urokinase, metalloproteinase

5. ANTICOAGULANT TREATMENT OF PORTAL VEIN THROMBOSIS IN PATIENTS WITH LIVER CIRRHOSIS

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SUMMARY: Anticoagulant treatment of portal vein thrombosis (PVT) represent an issue of debates, because available studies are mainly represented by case series with a small sample size, and thus, in most circumstances current knowledge on PVT is not based on firm scientific evidences. There has been no controlled study of any form of therapy proposed for portal vein thrombosis.

Keywords: hepatic cirrhosis, portal vein thrombosis

6. DAYTIME SYMPTOMS EVALUATION IN PATIENTS WITH CHRONIC RHCOPATHY

Dragoș Ștefănescu M.D.; Ph.D.

SUMMARY: Obstructive sleep apnea patients may suffer from memory and cognitive problems and excessive daytime sleepiness as well as from mood disturbance, among other symptoms.

The aim of this study is to assess whether there are any differences in daytime sleepiness, short term memory and depression between a group of patients with obstructive sleep apnea and another of snoring individuals who had not been diagnosed as suffering from OSAS.

Method: Subjects - The sample was made up of 12 snorers and 13 patients with OSAS. Instruments - All tests (polysomnograph, Epworth Sleepiness Scale, "3 things" test and Beck's Depression Inventory) used in the evaluation of snoring subjects and obstructive sleep apnea patients were carried out in our sleep laboratory.

Results: Daytime sleepiness for obstructive sleep apnea patients is higher than observed in the sample of snoring subjects. With respect to the short term memory variables, the results indicate

there were no statistically significant differences between the group of snorers and the apnea subjects. The average scores show that depression levels are higher in apnea patients than in the snoring group.

Key words: chronic roncopathy, sleepiness, depression, memory

7. SLEEP AND SLEEP RELATED DISORDERS

Dr. med. Martin Konermann,

8. SCIENTIFIC EVENTS OF LABORATORY MEDICINE IN 2008

Daniela Apăfaian bioch., Anca Grigorescu bioch.