

**FOREWORD OF THE PRESIDENT OF ROMANIAN SOCIETY OF  
AEROSPACE MEDICINE AT THE 16<sup>TH</sup> ANNUAL SESSION OF  
AERONAUTICAL MEDICINE AND PSYCHOLOGY „90 YEARS OF  
AERONAUTICAL MEDICINE IN ROMANIA” - BUCHAREST, NOVEMBER 5<sup>TH</sup>  
2010 -**

Romania celebrates this year, and this is not a coincidence in my opinion, three great moments in aviation history, both national and international: first flight of an airplane designed, built and flown by Aurel Vlaicu in June 1910, first jet plane designed and built by Henri Coanda in December 1910 and last but not least foundation in 1920 of the Center for Aeronautical Medicine by General Doctor Aviator Victor Anastasiu, whose statue was displayed 10 years ago in front of the National Institute of Aerospace Medicine building.

So, 90 years of aeronautical medicine in Romania, our country being among the first in the world who created such a medical institution and consequently understood the role of human factor in aviation. As time went by, regardless the location in Pipera, Ceasornicului or current headquarter, the specialists in aeronautical medicine proved their professionalism in medical and psychological expertise of flying crew, emitting internationally valid certifications.

Our predecessors build with patience, dedication and a lot of heart what is today known as The National Institute of Aerospace Medicine „General Doctor Aviator Victor Anastasiu”. We thank them one more time for their work and we assure them we understood their legacy.

And what can be more significant than 2011 hosting by The Romanian Society of Aerospace Medicine and The National Institute of Aerospace Medicine and under the auspices of National Defence Ministry and International Academy of Aerospace Medicine of the 59th International Congress of Aerospace Medicine, for the first time in this geographical area, congress which will have motto: ”Roots in the past, wings for the future” and will open with the presentation „ 1981-2011, 30 Years since First Cosmic Flight of a Romanian Cosmonaut”. Definitely, this congress is a big challenge for us, and will be the definitive and if you accept, official recognition of the spot occupied by Romania, represented by The National Institute of Aerospace Medicine in this fascinating and complex area of expertise.

All we can say is that we are proud of our history and of belonging to what nowadays became The National Institute of Aerospace Medicine, a brand in Romanian medical business and beyond. This became possible due to the constant and consistent support by The Ministry of National Defence which, even in this financial challenging time, assured us the founding necessary for standards maintenance and development.

**Prof. Marian MACRI, M.D., Ph.D.  
President of Romanian Society of Aerospace Medicine**

**DR. SILVIO FINKELSTEIN'S MESSAGE ON THE 16<sup>TH</sup> ANNUAL SESSION OF  
AERONAUTICAL MEDICINE AND PSYCHOLOGY „90 YEARS OF  
AERONAUTICAL MEDICINE IN ROMANIA”**

Dear Colleagues,

Having reviewed in detail the scientific program, I wish to congratulate all of you for discussing important clinical (medical and surgical) and research matters in our discipline.

At the same time, it pleases me that we are celebrating 90+ years of aviation medicine in Romania.

Let's remember that, thanks to the efforts of aviation medicine practitioners and researchers worldwide, the health and the safety of crew members and passengers is assured on a global scale.

And last, but not least, we are embarking on the final countdown for the ICASM 2011. All of us, working together could and should offer an outstanding congress next September.

I wish you the best and success in all your endeavors.

**Silvio Finkelstein,  
R.S.A.M. Honorary Member**

**REACTIVE CHANGES THAT OCCURED IN THE FLYING PERSONNEL'S  
BLOOD SMEARS (BS) – PRELIMINARY OBSERVATIONS**

**Simona Berbecar, M.D., Ph. D., Simona Berar, M.D., Herminia Păsăilă, nurse,  
Daniela Neagu nurse, Negoită Mihaela nurse, Raluca Schuster nurse, Mariana  
Manea nurse,  
Gabriela Ispas nurse**

**Summary**

**Objective:** We started a large clinical and paraclinical prospective study in January 2010 in NIASM in order to establish the professional adaptive changes which may occur on flying personnel (FP). This research represents the next step in a previous laboratory research which we developed in NIASM between 1994 and 2003.

**Material and method:** We studied until this moment 502 BS (blood smears) of FP which attended the periodical medical expertise. We noticed that 156 (31.08%) of them presented various types of reactive changes.

**Results:** Automatic hematology analyzer showed normal or minimal abnormal results from our subjects (moderate increase of eosinophils, neutrophils and monocytes). Still we observed the following changes when we studied BS:

1. moderate eosinophily (5-21%) – at 62 cases;
2. moderate basophily (1-3%) – at 64 cases;
3. neutrophily – at 11 cases;
4. lymphocytosis at 32 cases;
5. moderate monocytosis at 25 cases;
6. presence of reactive lymphocytes at 91cases;

7. presence of lympho – plasma cells at 23 cases;
8. LGL („large granular lymphocytes”) – at 48 cases;
9. neutrophils with over segmented nucleus at 17 cases;
10. non-segmented neutrophils at 9 cases;
11. neutrophils with apoptotic nucleus at 7 cases.

In some cases we noticed that erythrocytes and trombocytes had associated morphological changes.

**Conclusion:** this paper presents laboratory preliminary results focused on hematological morphology. They justify the study of some significant clinical and paraclinical (hematological and biochemical) changes - with possible alert significance - at FP which perform the medical expertise at NIASM.

### **OXIDATIVE STRESS INDUCED BY SIMULATED CONDITIONS OF HIGH ALTITUDE HYPOXIA**

**Daniela Apăfăian, bioch., Ilie Capanu M.D., prof. Anca Dinischiotu Ph.D.,  
assoc.prof. Cristina Munteanu Ph.D., drd. Mihaela Radu, Angelica Raicu, nurse,  
Herminia Păsăilă, nurse**

#### **Summary**

In recent years, evidence of some stress conditions and of some systemic and local oxidative diseases, which result from a large imbalance between oxidant production and antioxidant capacity, were reported during and after exposure to hypoxia.

The **objective** of this study is to examine whether there is evidence of the presence of the oxidative stress under simulated conditions of high altitude hypoxia, by evaluating the marker of lipid peroxidation – malondialdehyde (MDA) and the markers of advanced oxidation proteins products (AOPP).

**Keywords:** hypobaric hypoxia, oxidative stress, lipid peroxidation, malondialdehyde, AOPP

### **SYMPTOMATIC HYDRONEPHROSIS DURING PREGNANCY – PROS AND CONS OF THE JJ STENT**

**Irina Negru, C. Pricop, Gh Costachescu, O. Nicodin, D. Mischianu, N. Niculescu**

#### **Summary**

**Purpose:** To evaluate the diagnostic and therapeutic challenges in symptomatic hydronephrosis in pregnant women and the impact of the JJ stents over the symptoms.

**Method:** 82 pregnant women were admitted between first of January 2008 and 31<sup>st</sup> of December 2009. The diagnosis was based on clinical, laboratory and ultrasound findings. Conservative treatment was the initial therapy but for 56,1% an endourological intervention become necessary (42 cases – JJ insertion, 4 cases – percutaneous nephrostomy when JJ placement failed). We avoid retrograde semi-rigid ureteroscopy and eventually destruction of a possible stone with Swiss Lithoclast for safety reasons. The evolution and impact of the JJ stent were monitorized with special tests, completed by the patients themselves at home. **Results:** The medical treatment was successful in 36 of cases (43, 9%). Infected hydronephrosis was detected in 69,04% of cases. In 22 cases

(52,4%) it was necessary to replace the stents before of delivery. Based on the questionnaires the JJ stents were acceptable tolerated in 83,4% of cases. **Conclusions:** Endourological minimal invasive methods are the efficient therapy of symptomatic hydronephrosis in pregnant women when the initial conservative treatment fails. The questionnaire, completed by the pregnant woman herself at home is a good tool to make the patient more responsible and to evaluate more accurately the impact of JJ stent.

Key-words: hydronephrosis, pregnant women, JJ stents.

## **BRUXISM - A PARAFUNCTION OF THE DENTO-MAXILLARY APPARATUS OR A SLEEP DISTURBANCE**

**Veronica Mercuț, Monica Scriciu, Daniel Iorgulescu, Mircea Suci, Monica Baniță,  
Florin Bobia, Petre Mărășescu, Răzvan Mercuț**

### **Summary**

Bruxism is the term which is generally used to define the day and night parafunctional activities of the dento-maxillary apparatus, which consists in maxillary fastening, teeth grinding and clenching, associated with dental wear, pains of the masticatory muscles, disturbances of the temporomandibular articulation and a sense of early morning tiredness.

There are two different forms of bruxism: aware bruxism by day which manifests itself during periods of anxiety and nervous tension and bruxism by night, which manifests itself during sleep. Adults can present either bruxism by day or by night or both forms, compared to children which present only bruxism by night.

The importance of bruxism comes from the high frequency of this disease, between 6% -20% according to Glaros A.G. (5), the loco regional of several types loco-pathology, which alters the morphology of teeth and creates difficulties during conventional oral rehabilitations or those with an implant. Therapeutical difficulties are associated with a big number of cases of failures and unfavourable evolutions of the disease.

The present scientific paper brings forth a presentation of etyopathogenical mechanisms involved in the apparition and maintenance of bruxism.

**Key words:** bruxism, parafunctional activity, dental wear.

## **THE VALUE OF IMPLANTOLOGY IN MEDICAL DENTISTRY**

**Dragos George Marinescu, M.D.**

### **Summary**

The purpose of this article is an introduction into the field of the oral implantology. In this article, we present the advantages of this functional and aesthetically restoration method of the oral cavity. We briefly describe the most used materials for the dental implants and prosthesis. On precise some aspects regarding the patients accessibility at this new procedures.

**Key words:** oral implantology, biomaterials, functional restoration, aesthetics

## **THE PLEASURE OF FLYING. 100 YEARS FROM THE FIRST ROMANIAN FLIGHT, 90 YEARS OF AERONAUTICAL MEDICINE AND PSYCHOLOGY**

**Doina Trandafir, psychologist, Violeta Ionescu, psychologist, Ph.D.**

This year we celebrate 100 years from the first flight on Romanian ground. From the clockwork dove, built by Greek philosopher Archytas din Tarentum (400-365 BC), many works were concerning in solving the flight mysteries and many lives were lost for this dream. The flight of that device is described in The History of Romanian Aviation (p. 16): “The dove were sustained in air thanks to a secret mechanism, but once stopped, it couldn’t rise again”. In that time, the raise, air maintaining and the possibility to fly again was the success criteria. But from the moment when the dreamers get wings, the space of legends and mythologies were conquest.

*I raised beyond the limit of human being powers. I entered the place where the man means nothing against the almighty infinite. (Vlaicu, 1911)*

## **USING THE INCOMPLETE SENTENCE BLANK TEST IN AERONAUTICAL FIELD**

### **- DESCRIPTIVE STATISTICS- (III)**

**Doina Trandafir psychologist, Violeta Ionescu Ph.D., psychologist**

**Iuliana Tudor, assistant**

### **Summary**

Personality may be evaluated by using questionnaire and projective tests which allow a higher degree of freedom related to subject’s answers (like Rorsarch test and tree drawing test).

The Incomplete Sentence Test is a projective task where there are given a series of incomplete sentences for finishing. By evaluating the responses, an evaluator makes some judgments about the subject’s personality.

We used a number of 23 sentence beginnings to be completed. 3680 items were analyzed corresponding to 160 evaluated subjects. We made groups of similar responses (finishing categories). For each of them, descriptive statistics were calculated. We found that there are typical finishing (those who were used more often) and uncommon finishing. All these will be analyze lately.

**Key words:** personality psychological evaluation, incomplete sentence blank test, pilot psychological selection.