

PHYSIOPATHOLOGY OF LABYRINTH IN AVIATION

Professor Doctor Miguel Munoz Colado

SUMMARY

When the human body is subjected to extreme changes in pressure and accelerations to which it is unaccustomed, alterations can occur in the vestibular system that can provoke serious accidents due to special disorientation. The present article aims to explain the physiology of the vestibular system under extreme conditions and the possible solutions to these problems that have been developed to avoid aviation accidents.

Key words: Vestibular illusions. Vestibular physiology. Vection illusions. Somatogyral illusions. The leans.

NIGHT VISION GOGGLES IN HELICOPTER OPERATIONS

Cristina Ștefănescu M.D., Cristian Dragos Ștefănescu M.D., Ph.D.

SUMMARY

The use of Night Vision Goggles (NVG) in Romania raises a challenge policy predicament. There is currently no legislation to prevent the use of NVG; the lack of regulation has meant that operators are current flying under Night Visual Flight Rules (NVFR) to carry out night missions. In this paper the existing literature is reviewed and the human factor benefits and limitations of NVG use operations are identified. The authors describe the findings from research in the field of NVG use by various civil and military organizations.

Key words: Night vision goggles, helicopter operations

THE DIAGNOSTIC VALUE OF DIGITAL FUNDUS CAMERA IN OPHTHALMIC AEROMEDICAL EXAMINATION OF FLYER PERSONNEL

Maria-Mădălina Șerban M.D., Assoc.prof. Marian Macri M.D., PhD, Aurora Nicodin MD

SUMMARY

The evaluation of eye fundus during ophthalmic examination of waiver personnel is very important, this segment being the site of certain diseases that can affect flight safety. The advantages of digital fundus imaging are: precise diagnostic with real time image analyze; diagnostic of certain diseases that affect medical license in initial waivers; documentation of disease progression by storage and comparative analyze of digital photographs; use of computerized data base for legal medical purposes after accidents or

incidents during flight. Eye fundus imaging with Digital Fundus Camera prove itself to be a precise, modern and useful method that can improve the accuracy and safety of ophthalmic examination in waiver personnel, by comparison with other methods.

Key Words: digital Fundus Camera, aeromedical ophthalmology examination, flyer personnel

SEVERE AORTIC REGURGITATION IN A YOUNG PATIENT - CASE REPORT -

Șotcan Mihai M.D., Popescu Dragoș M.D., PhD, Anghel Mirela M.D., PhD, Copaci Iulian M.D., PhD, Enache Mihaela M.D., Pr. ass. Vasile Cornelia

SUMMARY

A 36-year old patient presented to our department for fatigue and dyspnea. Physical examination revealed a tall and thin patient with arachnodactyly, severe pectus excavatum, and thoracic scoliosis. Echocardiography revealed a dilated left ventricle, important dilatation of aortic annulus and of ascendant aorta, severe aortic regurgitation. Clinic and imagistic examinations lead to the diagnosis of Marfan syndrome.

Keywords: aortic dilatation, skeletal disease, Marfan syndrome.

NON-ALCOHOLIC FATTY LIVER DISEASE AND METABOLIC SYNDROME

Florica Năftănăilă M.D.

SUMMARY

Non-alcoholic fatty liver disease (NAFLD) is now the commonest liver disorder in the developed world affecting up to a third of individuals. It is closely associated with features of the metabolic syndrome, particularly obesity and diabetes. It can progress to cirrhosis, hepatocellular carcinoma and liver failure and is an increasing indication for transplantation.

Key words: NAFLD, NASH, Steatosis.

FLIGHT PERFORMANCE: SEGMENTATION OF *AB-INITIO* APPLICANTS

Ana Gomes, Psychologist

SUMMARY

The aim of this paper is to find latent classes in a sample of pilot applicants to the Portuguese Air Force Academy (AFA). The selection process of pilot applicants to the AFA is a long and expensive program. It is developed in four evaluation stages (psychological, medical, physical and the flight screening). These phases are sequential

and eliminatory. Latent Class Analysis (LCA) is used in way analogous to cluster analysis, that is, given a sample of cases (applicants) measured on several variables, one wishes to know if there is a small number of basic groups into which cases fall. So, the main purpose of this study is the clustering of the applicants based on their flight performance (assessed in the flight screening), and computerized aptitude tests (psychological stage).

Keywords: segmentation, flight performance, latent class analysis, pilot applicants

CARDIOLOGY IN 2008

Mirela Anghel, MD, PhD, Marcela Mureşan, MD