

ALTITUDE ACCLIMATIZATION CHALLENGES

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Summary

Introduction. Humans knew adverse effects of altitude exposures since the first climbs of unacclimatized people. Indigenous populations residing at high altitudes were better suited for the environment and less prone to the mountain sickness. Understanding the acclimatization at altitude is the key to understanding sickness, and more important to prevent it.

Methods. A literature review focused on key items like altitude acclimatization, altitude physiology, mountain sickness and altitude effort capacity.**Results and discussion.** we focus on important issues of altitude acclimatization outside of classical paradigm like metabolic changes, effort capacity factors, means to check adaptation, periodical breathing, temperature regulation, medication. A brief guideline to successful acclimatization is given as concluding remarks.

Conclusion. Altitude acclimatization is a difficult subject, but practitioners would better become familiar to it because of increased activities of non-native population at high altitudes.

Keywords: altitude acclimatization, guidelines, challenges

HIGHER ORDER ABERRATIONS OF THE HUMAN EYE AND AERONAUTIC OPHTHALMOLOGY

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Summary

The optical aberrations are distortions acquired by a wave of light as it passes through an optical medium. The normal human eye is characterized by low order aberrations, also known as refractive errors (myopia/hyperopia or defocus and astigmatism- aberrations until 2nd order). Only 10% from the total ocular aberrations are high order aberrations (3rd order or more), with mirror symmetry between the two eyes (Figure 1). The higher order aberrations are defined as complex distortions acquired by a wavefront of light when it passes through an eye with irregularities of its refractive structures. The higher order aberrations can affect the quality of vision, with a decrease in contrast sensitivity and unpleasant visual phenomena like blurry image or halos.

Key words: aeronautic ophthalmology, high order ocular aberrations

UPDATES IN CARDIOLOGY

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Summary

Recently, European Society of Cardiology (ESC) has launched, at the annual congress,

updated guidelines / statements on certain diseases in cardiology.
This article is intended to underline the keys messages on some latest ESC guidelines and their impact in clinical practice.

Key words: guidelines, European Society of Cardiology, prevention, cardiovascular disease

DEEP INFILTRATING ENDOMETRIOSIS

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Summary

Purpose. Presentation of a complex deep infiltrating endometriosis case.

Materials and method. Patient is 30 years old. The diagnose before surgery was: nephritic right ureter. During the surgery: infiltrating endometriosis stage IV with ureterhydronephritis. The procedure: cystectomy of the endomembrane of the ovaries. Replantation of the ureters, and the bladder on the right side.

Conclusion. Infiltrating endometriosis is a surgical affection that requires interdisciplinary surgery or gynecological surgery.

Key words: deep infiltrating endometriosis, ureterohydronephrosis, rectovaginal septum Infiltration

CONSERVATIVE TREATMENT OF TUBAL PREGNANCY

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Summary

Objectives: establishing the indications of conservative treatment in ectopic pregnancy.

Materials and methods: between 2012-2014, thirteen patients with ectopic pregnancy have been treated with conservative surgical techniques.
Pre- and intraoperative exclusion criteria were: ectopic gestational sac size exceeding 6 cm, fetal heart activity, β -hCG serum levels > 20,000 mIU/ml, previous surgery on the affected fallopian tube, isthmic ovular implantation.
Thus were selected the following cases: absence of the controlateral fallopian tube / functional compromised, gestational sac unruptured and ampulo-pavilionar implantation; we decided to apply laparoscopic linear salpingotomy, gestational sac extraction with bipolar hemostasis.

Results: we have obtained five intrauterine pregnancies and two ectopic pregnancies

which required radical treatment (salpingectomy). Two pregnancies have been completed with gestation carried to term. There were no favorable results in patients who had other associated factors of infertility.

Conclusions: in selected cases laparoscopic surgery allows the anatomical and functional restoration of the fallopian tube affected by pregnancy and offer a chance in getting a desired pregnancy.

Key words: conservative treatment, ectopic pregnancy, laparoscopic surgery

HUMAN PERFORMANCE AND SAFETY CULTURE IN MILITARY AVIATION

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Summary

Human performance is mentioned as a contributing factor in many aviation events. For the prevention of aviation accidents a better understanding of the human factor is required and the knowledge of this area to be extended and applied proactively. The safety culture has a particularly important role in this endeavor by supporting any initiative or intervention in human factors.

Aviation safety depends equally to the participation of the leadership and staff. Policies and standard operating procedures should be developed so as to allow the dissemination of knowledge in human performance.