

## **AN ANALYSIS OF THE EFFICIENCY OF KINESIOTHERAPY IN THE PREVENTION AND TREATMENT OF OSTEOPOROSIS FOR THE AERONAUTICAL PERSONNEL**

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### **Summary**

The present article focuses on two groups consisting of 51 aeronautical individuals and 34 non-aeronautical individuals, which were compared and observed after rigorous clinical and paraclinical testing, as it was stipulated in the study protocol: clinical test, lab analysis, osteodensitometry DXA. The statistical analysis was performed on the two groups after considering 23 risk factors and it did not reveal significant differences between the two groups. However, osteodensitometry DXA and all the other biochemical parameters that were compared in the study (except for glycaemia) revealed some major differences, because the aeronautical individuals face a greater risk for developing osteoporosis if they are engaged in a large number of flight hours. In order to prevent and cure this disease, we set up a training kinesiotherapy program (KT), which was implemented on the subjects of both groups for three times a week for one year, exhibiting a favourable evolution of all the parameters under analysis.

**Keywords:** osteoporosis, kinesiotherapy, aeronautical personnel

## **THE VALUE OF ULTRASOUND IN PREVENTING AERONAUTICAL DECOMPRESSION SICKNESS**

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### **Summary**

**Introduction:** a review of the bubble formation in decompression sickness, presenting the theoretical models and the limited applicability in aeronautical environment.

**Material and methods:** we did a literature review on current state of the art regarding bubble detection and decompression sickness at altitude, aiming in determining if it is a basis for a series of experiments regarding DCS at altitude.

**Results and discussion:** literature data regarding bubble detection, scalabilitz and relevance in aeronautical environment are presented.

**Conclusion:** following these theoretical considerations, we believe there is a ground for a more specific correlation between circulating and local bubbles and DCS symptoms. Moreover, since bubbles are to be found in the right heart, excluding any right-left shunts are mandatory for high altitude operations.

**Key words:** decompression, bubbles, ultrasound, altitude

## **SOME CONSIDERATION CONCERNING THE SURGERY OF FIBROUS DYSPLASIA OF MANDIBLE AND TEETH**

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### **Summary**

Fibrous dysplasia represents a benign genetic disease, characterized by a developmental anomaly of the bone, due to normal bone replacement with abnormal fibro-ossteous tissue, caused by mutations of GNAS gene. Mandibular fibrous dysplasia lesions are among most frequent, usually being discovered incidentally on dental x-rays or in relation with local specific symptoms.

The authors reviewed the pathology in terms of clinical, pathological, imaging and therapy, suggesting the importance of surgery in resolving stable symptomatic fibrous dysplasia lesion of the mandible.

**Keywords:** mandibular fibrous dysplasia, osteointegration, ultrasonic aspirator, piezosurgery

## **CURRENT INDICATIONS FOR HYPERBARIC OXYGEN THERAPY**

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### **Summary**

A review of current indications for Hyperbaric Oxygen Therapy (HBOT) according to the latest trials and meta-analyses, highlighting the differences between the old evidence-level grading system and the most recent one. The authors also present the current session protocols used or recommended by the HBOT clinic of I.N.M.A.S.

**Key words:** Hyperbaric Oxygen Therapy, indications, protocols, trials, meta-analysis

## **RADIOFREQUENCY TUMORAL VOLUMETRIC REDUCTION OF THE REMNANT RHYNOPHARINGEAL TUMORS**

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### **Summary**

**The aim** of this paper is to present technic and technological aspects related to radiofrequency reduction of refractory malignant tumor after oncologic treatment or tumor recurrence after 2-5 years.

**The methodology** of this paper is to investigate pre- and post-operative the neoplastic lesion which underwent a radiofrequency (RF) volumetric reduction.

**Cases** are especially selected from refractive malignant tumors (remnant after irradiation) or from tumor recurrence cases and the tumoral reduction was functionally performed for serous otitis media and dysphagia. The authors present an original radiofrequency surgical accessory adapted especially for Rossenmuller fossa surgery, which is a one of the most common location of nasopharyngeal cancer.

**Discussion** refers to radiofrequency surgical technologies and take into account significant postoperative results after a correct surgical indication.

**The conclusions** emphasize the utility of surgical technology based on radiofrequency in treating remnant after irradiation malignant tumors, insufficient tumor lysis and tumor recurrence after radiotherapy.

**Key words:** rhinopharyngeal, radiofrequency, radiofrequency surgical accessory

## **EPIDERMOID SPLENIC CYST - A CASE REPORT AND REVIEW OF THE LITERATURE**

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### **Summary**

We present a rare case of epidermoid splenic cyst in a young female patient operated in our department. According to the recent medical literature reports, epidermoid splenic cyst is among the unusual cystic splenic pathology. There is a general consensus that preoperative diagnoses is usually extremely difficult, but despite a low incidence should be always considered during differential preoperative diagnosis in cases of abdominal mass.

**Keys words:** splenic cyst, epidermoid, surgery, abdominal mass.

## **TREATMENT ALTERNATIVES FOR CLASSICAL SURGERY ON ABDOMINAL COLLECTIONS**

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### **Summary**

Abdominal collections represent a complex pathology that involves a high degree of difficulty in all stages of the medical care, starting with diagnosis, the undertaking of therapeutic attitude considering the patient's medical history and the context of abscess development, as well as patient supervision during the post-procedural period. Nowadays, along with the development of imaging scans and ultrasound, as well as the development of optical endoscopic systems and related instruments, the percutaneous drainage, and eventually endoscopic drainage, becomes a new way of treating abdominal collections, and, from our point of view, this should be the first intention when the patient has an indication for such an approach. We present the case of a 77 years old patient who has developed an abdominal collection after classic cholecystectomy, and its treatment and complications after percutaneous drainage under ultrasound guidance.

**Keys words:** intraabdominal collections, ERCP, treatment

## **PRIMARY HYPERPARATHYROIDISM – AN OVERLOOKED CAUSE OF DYSPEPSIA**

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### **Summary**

Dyspepsia represents an upper gastrointestinal tract syndrome presenting with epigastric pain and discomfort, sensation of fullness, early satiety, nausea, vomiting, and belching. Clinical examination and evaluation is required to distinguish between the two main subtypes of dyspepsia: functional and organic. Initial evaluation should focus on the identification and treatment of potential causes of symptoms of gastroesophageal reflux disease, peptic ulcer disease, hypercalcemia and medication side effects, while also recognizing individuals at risk for more serious conditions such as gastric cancer or primary hyperparathyroidism.

The main issue regarding the approach of the patient with uninvestigated dyspepsia is whether the symptoms are the results of a organic or functional cause, and their refractoriness to available standard therapy, which is an indicator of a more serious pathology. This article discusses the evaluation and management of dyspepsia, the role of proton-pump inhibitors, treatment of *Helicobacter pylori*, and a special case presentation of a patient with dyspepsia secondary to a parathyroid adenoma resulting in primary hyperparathyroidism.

**Keywords:** dyspepsia, proton-pump inhibitor, *Helicobacter pylori*, primary hyperparathyroidism

## **THE LINK BETWEEN WORKLOAD AND PERFORMANCE OF SPORTIVE PILOTS, IN ACROBATIC FLIGHT TASKS**

Frațilă Alma, psychologist

### **Summary**

Human factors and ergonomics research continues to demonstrate the importance of workload upon an individual's ability to react to incoming information and upon performance. Therefore, a workload situation is likely to increase human error. For this purpose, assessing workload is important for developing a complex system, especially when human operators must control the system in a multitask environment.

The study aims to investigate correlations between subjective workload and subjective performance in acrobatic flight tasks. In order to accomplish this purpose is desired to obtain a correlation score between workload and performance in each of the flight tasks, which are being analyzed (take-off, landing, looping, spinning) and a general correlation score between workload and performance in the whole flight program. These correlations will be studied across five hypotheses.

Another aim of the study is to register the sportive pilots' perception on the intensity the various professional demands is exerting them in four flight tasks: take-off, landing, looping and spinning. In order to accomplish this purpose, a ranking it will be elaborated by virtue of five indicators of workload of the NASA Task Load Index instrument (mental demand, physical demand, temporal demand, effort and frustration).

**Key-words:** workload, performance, sport-pilots, fly tasks.