

### SPA balneotherapy of chronic venous insufficiency of the inferior limbs

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The Chronic Venous Insufficiency (CVI) of inferior limbs is a widespread disease, with an increasing incidence as a consequence of longer life expectancy, life-style, obesity, smoking, use of drugs as oestrogens and progestins and working conditions.

Medical therapy, as bioflavonoids, tri-idrossimetilrutoside, troxerutine, diosmine, minor antithrombotics, is still lacking for evidence of efficacy, and compression therapy is useful only in preventing a worsening of this condition. Surgical treatment is the only radical therapy effective for the advanced phases of the disease. In this context spa balneotherapy can be considered as a possible chance to improve some subjective and objective symptoms of CVI of inferior limbs, and to prevent worsening of this condition.

It has been performed a review of the relevant scientific literature concerning the treatment of CVI of inferior limbs with mineral water balneotherapy, in order to evaluate its effects on objective and subjective symptoms and its effectiveness to prevent further worsening. We searched the PubMed, Medline, Cochrane Library, Embase, Web of Science databases for articles published between 1990 and 2011 on this topic with any of the following key words: *balneotherapy and vascular diseases, venous disease, spa therapy, mineral waters*.

We found few studies belonging to the criteria of controlled clinical trials and many others performed as case-control ones; patients affected from CVI of inferior limbs were treated with balneotherapy at health spas with sulphureous, sulphate, salsojodic or salsobromo-jodic mineral waters. Baths in mineral waters were often associated with idromassotherapy and vascular pathway. Effects of spa balneotherapy are related to some aspecific properties, like hydrostatic pressure, osmotic pressure and water temperature, partly related with specific chemical-physical characteristics of the adopted mineral water (the anion and cation content, the presence of undissociated salts and oligoelements, the electric conductivity).

The controlled clinical studies on spa therapy showed significant improvement of subjective (such as itch, paresthesias, pain, heaviness) and objective symptoms (namely edema and skin discromias). These studies suggest that spa balneotherapy may give a good chance of secondary prevention and effective therapy of CVI of inferior limbs, but also that it needs of other clinical controlled trials.

### The new skills of the Internist in the perioperative care of surgical patient

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Centro Chirurgico Toscano is a private surgical centre that in the last few years has significantly increased the activities that are oriented toward Orthopaedic Surgery and Urological Surgery but the entire Surgical Field.

The numbers of orthopaedic surgical procedures has increased from 732 in 2009 to 914 in 2011, with parallel increased of prosthetic

surgical procedures from 245 to 386 also Urological interventions have increased from 315 in 2009 to 456 in 2011.

The projections of the first quarter of 2012 predicts of an increase in this tendency.

Consequently there appears to be an increase of the medium age of the patients that are exposed to major surgical procedures that often requires the necessity of a competent Internist to manage these problems.

Because of the above, Centro Chirurgico Toscano has adopted a model of managements which require the following:

The modification of the inpatient areas according to the depth of intensive of care related to the complexity of the surgical procedure. A total 24 h presence of a Physician (Hospitalist) who specialized as an Internist who must complement the activities of the Surgeon, Anaesthesiologist and Cardiologist in managing the perioperative care of these patients.

We maintain that Internal Medicine, according to the virtues of specific methods and contents, will undertake the pre and post-operative care of the surgical patients allowing the Surgeon to concentrate his skills in undergoing the present operative procedure.

Therefore the new managerial role of the Internist implies integrating the anaesthesiologist capacity and by training to integrate his professional skills because, in an Hospital organized by Intensive of care, the Internist should prepare the Patient to the surgical procedure, manage the post-operative care of the patient and subsequently follow the patient until their discharge from the Hospital.

### Effects of general anesthesia on non linear indexes of HRV during abdominal surgery

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The Heart Rate Variability (HRV) signal contains mass information, which concerns the cardiovascular nervous system and the analysis of the HRV signal is one of the key techniques for the clinical studying and diagnosing the cardiovascular diseases. Newer HRV measures are model independent, suitable for nonlinear processes, and measure aspects of HRV different from the traditional methods.

The aim of this study was to evaluate the effects of deep general anesthesia on the HRV using non linear analysis in patients undergone to abdominal surgery.

**Materials and Methods:** We studied 7 subjects of both sexes (5 women) with a mean age of  $54.4 \pm 5.8$  years with digestive diseases. None of the patients used drugs or was suffering from cardiovascular or metabolic disease.

The patient was anesthetized after endotracheal intubation. The recording was performed before anesthesia induction and after 5 min after the start of maintenance. The third measurement was performed at 24 h after surgery. ECG signal recording, lasting 5 min each, were made using a digital ECG with dedicated software (Xai-Medica) for PC storage and off-line analysis (Kubios HRV).

**Nonlinear Methods:** Poincaré Plots: Two-dimensional vector analysis was used to quantify the shape of the plots. In this quantitative method, short-term (SD1) and long-term R-R interval variability (SD2) and the ellipse area of the plot are separately quantified. The Detrended fluctuation analysis (DFA) was used to quantify the fractal scaling properties of short- and intermediate-term R-R interval time series. The