

Balnea

Medical Hydrology and Balneology: Environmental Aspects



Francisco MARAVER & Müfit Zeki KARAGÜLLE
(Editors)

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Balnea

Balnea es una serie de monografías relacionadas, con la revista *Anales de Hidrología Médica*, una publicación de periodicidad anual. En sus páginas se editan primordialmente investigaciones sobre aguas mineromedicinales y minerales naturales, así como sus productos derivados. Se presta especial atención a los aspectos sanitarios y socio-sanitarios de la Cura Termal, así como a los asuntos relacionados con la Balneoterapia, Talasoterapia, Hidroterapia y Climatoterapia. Acepta originales en inglés e incluye reseñas bibliográficas.

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**38th World Congress of the International
Society of Medical Hydrology and Climatology
Lanjarón – Granada 2012
“Medical Hydrology and Balneology:
Environmental Aspects”
June 20th to 23th 2012**

Message of the President of the organising committee
Prof. Francisco Maraver

Dear Colleagues and Friends

On behalf of the Organizing and Scientific Committees, Congress Sponsors and Executive Secretariat, we would like to extend a warm welcome to Spain for our 38th Int'l congress.

For the participants of Spanish medical hydrology and balneology, 2012 is a very special year. We are celebrating the 100th anniversary of the Chair of Medical Hydrology of the School of Medicine at the Complutense University of Madrid, as well as the 135th anniversary of the creation of the Spanish Society of Medical Hydrology.

Just thirty minutes from Granada, with its UNESCO declared World Heritage monuments since 1984 and where part of the social program was developed, is Lanjarón "land of healthy fountains", the venue of the congress. This historic thermal station, one of the most important in Spain, has lent its services since 1765 and is situated in privileged surroundings such as "The Sierra Nevada National Park", declared Biosphere Reserve by UNESCO. It is an example of respect for the environment that makes possible the long-term development of generating wealth.

Traffic evolution of the website of SEHM (2000-2010)

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Introduction and Objectives

From the Internet appearance the panorama of the communications has reached a global dimension that favors the exchange of ideas and the diffusion of the knowledge practically of instantaneous form. The Medical Hydrology has not been foreign to such a development and from the year 2000 the SEHM created and put his web page at the disposal of the partners and all that person been interested in the matter.

To develop the evolution of the web page of the SEHM from his creation in the year 2000 until the year 2010 demonstrating the enormous acceptance, reception and follow-up that has had, appearing as a very powerful way for the spreading and development of our speciality

Materials and Methods

There was studied the information obtained thanks to the book-keeper of the web page www.hidromed.com lodged at the direction <http://webstats.motigo.com>.

Results

On going indexes

Conclusions

The web page of the SEHM has been revealed how an indispensable instrument for the spreading of knowledge, contact between professionals,

expansion and development of our medical speciality, must promote his utilization to continue advancing to all the levels and areas of the knowledge.

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3. <http://webstats.motigo.com>.

Keywords: Traffic, Web Page, SEHM

Thermal therapy in health: categorization of therapeutic indications for natural mineral waters in the region of Beira interior of Portugal

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Portugal is one of Europe's richest countries in thermal waters [1], and the majority of Portuguese thermal resorts are distributed by northern and central regions. The thermalism comprises the use of natural mineral water and other complementary means for prevention, treatment, rehabilitation or wellness [2]. The use of such water, also known as mineral-medicinal water, for therapeutic purposes has always been aroused a continuous interest in carrying out the characterization of this type of waters and the establishment of an eventual relationship for the treatment of a specific pathological condition. Thermal waters can be defined by waters from the subsoil, which are generated in specific geologic conditions and presenting "physico-chemical dynamism" [3,4]. Thermal mineral water has three fundamental characteristics: it originates naturally from the earth, it is bacteriologically pure and has therapeutic potential [3,4]. Most thermal waters are originated from the water resulting from precipitation, and with its infiltration in depth, they acquire particular physico-chemical characteristics, depending on the mineralogical composition of the geological formations through the water flows [1]. In fact, the geological variability in Portugal enables the occurrence of thermal waters with a high diversity in terms of physico-chemical composition [4].

Thermal waters are classified according to parameters such as temperature, osmotic pressure, radioactivity, chemical composition and mineralisation, being the latter two considered of greater importance [5].

The various therapeutic effects described with thermal therapy have been attributed to its physico-chemical composition, being classified as bicarbonated, sulfated, chlorided, sulphurous, hiposaline and gasocarbonic waters, and this correlation has been the basis for the indication of the different thermal resorts for different disorders of several vital systems of the body, and it is precisely in this context that the existing data are more controversial. From a simplistic and reductionist point of

view, most Portuguese thermal waters are described as weakly mineralized, sulphurous, bicarbonated or chlorinated and sodium type waters.

In the present work, a literature review was undertaken in order to create an index of information of physico-chemical composition of thermal waters of the Beira Interior region and its therapeutic indications, followed by an exhaustive statistical analysis to assess the correlation between the different physico-chemical parameters and the therapeutic indications described for that thermal waters.

The results obtained allow us to demonstrate the role of the major components of the thermal waters to a particular therapeutic effect and hence to create a useful tool for regional typology of the thermal waters in Portugal as a valuable alternative of the therapeutic armamentarium for well and specific-oriented pathological disturbs.

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Keywords: Portuguese Thermal Water; Physico-Chemical Composition; Therapeutic Effects

Recent contributions of the Geological Survey of Spain (IGME) in mineral water

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The Spanish Region of Galicia has been gifted with a long variety of mineral and thermal waters, which have been used in its territory since the Roman domination, several centuries ago. During the 21st century the interest in these waters has led to both the Geological and Mining Survey of Spain (IGME) and the Government of Galicia (Xunta de Galicia) to develop the research project "Historia y evolución científica y técnica del conocimiento de las aguas minerales de Galicia".

This project covers the study of many aspects of mineral and thermal waters of this Region, from legislation and history to hydrochemistry. In a previous research the Spanish territory was divided in 19 hydro-mineral domains, which are zones with a similar geology, hydrogeology and stratigraphy, which cause certain physical and chemical characteristics of mineral and thermal waters. One of the main results of this project has been to achieve a deeper knowledge of the Hercynian Massif Domain, which has been divided in 10 hydro-mineral sub-domains in Galicia.