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TECHIRGHIOI

- 115 YEARS OF BALNEOTHERAPY -

SCIENTIFIC PROGRAM

June 27-29, 2014

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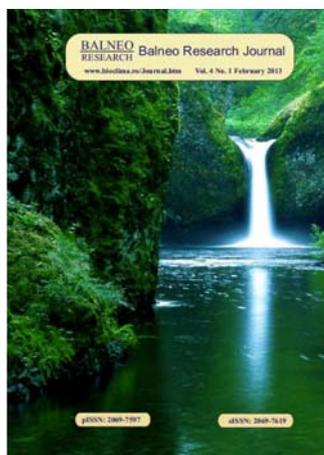
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TECHIRGHIOL - 115 YEARS OF BALNEOTHERAPY

SANATORIUL BALNEAR ȘI DE RECUPERARE TECHIRGHIOL

June 27-29, 2014

SCIENTIFIC PROGRAM

Friday, 27.06.2014

16⁰⁰-18⁰⁰ **Session 1 „115 Ani de Balneologie la Techirghiol”**

16⁰⁰ – 16²⁰ Drd. Liliana Elena Stanciu, medic specialist Recuperare, Medicină Fizică și Balneologie, S.B.R.Techirghiol, „*Sanatoriul Balnear și de Recuperare Techirghiol – Unitate sanitară de reper național și internațional a balneologiei românești*” - L. E. Stanciu, C. Oprea, V. Rusu, E. V. Ionescu

16²⁰ - 16⁴⁰ Director de îngrijiri Carmen Oprea, doctorand kinetoterapeut

„*Politici de calitate la Sanatoriul Balnear și de Recuperare Techirghiol*” - C. Oprea, L. E. Stanciu, V. Rusu, E. V. Ionescu

16⁴⁰ - 17⁰⁰ Conf. Univ. Olga Surdu, medic primar Recuperare, Medicină Fizică și Balneologie, doctor în Medicină, Universitatea Ovidiu Constanța, Facultatea de Medicină, S.B.R.Techirghiol

„*Techirghiol – Privire retrospectivă asupra activității științifice din ultimii 10 ani*” - O. Surdu, L. E. Stanciu, V. Marin, T-V Surdu, M. Surdu

17⁰⁰ - 17³⁰ Adrian Viorel Stan - primar Techirghiol -

“*Stațiunea Techirghiol – proiecte de dezvoltare*”

Saturday, 28.06.2014

9⁰⁰ – 12⁰⁰ **Session II „Mud therapy – international scientific news”**

9⁰⁰ – 9²⁰ Prof. Müfit – Zeki Karagülle, Department of Medical Ecology and Hydroclimatology, Istanbul University, Istanbul Medical Faculty, Turkey

“*Mud therapy in the management of rheumatic diseases; our experience*” - Mine Karagülle* and Müfit Zeki Karagülle**

9²⁰ - 9⁴⁰ Prof. Dr. Francisco Maraver - Professional School of Medical Hydrology, Faculty of Medicine, Universidad Complutense de Madrid, Dept. of Physical Medicine and Rehabilitation. Medical Hydrology, Faculty of Medicine, Universidad Complutense Madrid, Thalasso Center, San Pedro del Pinatar-Murcia, Spain

“*Current state of balneotherapy in Spain*”

9⁴⁰ - 10⁰⁰ Assist Prof. Dr. Antonella Fioravanti, Rheumatology Unit - Department of Medicine, Surgery and Neurosciences, University of Siena, Italy

“*One year effectiveness of mud bath therapy in knee osteoarthritis*” - Antonella Fioravanti, Nicola Antonio Pascarelli, Chiara Giannitti, Giovanni Bacaro, Mauro Galeazzi

10³⁰ - 10⁵⁰ Dr. Rzig Ouelasti – deputy Director of Național Office of Thermalisme, Tunisia

“*Mud therapy in Tunisia: applications methods, results, review of research*”

10⁵⁰ - 11¹⁰ Prof. Dr. Jacek Chojnowski – MD, Ph.D. President of Polish Association of Balneology and Physical Medicine, Head of Department of Metabolic Diseases Clinic of Balneology and Metabolic Diseases, Ciechocinek Nicolaus Copernicus University, Toruń Medicine

“*Peloid therapy in Poland: methods, effectiveness, review of research*”

11¹⁰ - 11³⁰ Dr. Ahmed Belaitar - Algeria

“*Thermal Situation of Hammam Chellala 2013*”

11³⁰ - 11⁵⁰ Prof. Dr. Onose Gelu, MD, PhD, University of Medicine and Pharmacy” Carol Davila”, Bucharest, Romania, Head of the P (neural-muscular) RM Discipline/Clinic Division - the National Reference Centre for Neuro Rehabilitation - and of its RDI Nucleus

“*Basic Wellness Features and Some Related Actions Propensive Including for Active and Healthy Ageing*”

12⁰⁰ - 13⁰⁰ Workshop: „*Medicina bazată pe dovezi – de la abordarea științifică la medotolatratrie*”

moderator: Conf. Olga Surdu, medic primar Recuperare, Medicină Fizică și Balneologie, doctor în Medicină, Universitatea Ovidius, Facultatea de Medicină, S.B.R.Techirghiol

15⁰⁰ – 18⁰⁰ Session III- „Nămolul mecanisme de acțiune și modalități de aplicare”

15⁰⁰ – 15²⁰ Dr. Demirgian Sibel, medic primar Recuperare, Medicină Fizică și Balneologie, doctor în Medicină, S.B.R.Techirghiol

„Beneficiile terapeutice ale nămolului sapropelic de Techirghiol în sindromul algic posttraumatic”

Autori: S. Demirgian, M. Minea, L. E. Stanciu, O. Surdu

15²⁰ - 15⁴⁰ Drd. Stanciu Liliana Elena, medic specialist Recuperare, Medicină Fizică și Balneologie, S.B.R.Techirghiol

„Implicațiile fiziopatologice ale nămolului sapropelic de Techirghiol în gerontoprofilaxie”

Autori: L.E. Stanciu, M. Minea, O. Surdu, V. Marin

15⁴⁰ - 16⁰⁰ Dr. Ionescu Valentina Elena, medic primar Recuperare, Medicină Fizică și Balneologie doctor în Medicină, S.B.R.Techirghiol

„Evaluarea efectelor nămolului sapropelic de Techirghiol asupra adipokinelor în osteoartrită”

Autori: E.V.Ionescu, L. E. Stanciu, M. Minea, T.V. Surdu

16³⁰ – 16⁵⁰ Dr. Viorica Marin, medic primar Recuperare, Medicină Fizică și Balneologie, doctor în Științe, S.B.R. Techirghiol

„Efecte fiziologice și terapeutice produse de componenta biochimică a aplicației nămolului sapropelic de Techirghiol”

Autori: V. Marin, L.E. Stanciu, M. Minea, O. Surdu, T.V. Surdu

16⁵⁰ – 17¹⁰ Dr. Profir Daniela, medic primar Recuperare, Medicină Fizică și Balneologie, doctor în Științe, S.B.R.Techirghiol

„Efecte fiziologice și terapeutice produse de componenta biofizică a aplicației nămolului sapropelic de Techirghiol”

Autori: D. Profir, L.E. Stanciu, M. Minea, O. Surdu

17¹⁰ – 17³⁰ Conf. Univ. Dr. Olga Surdu, medic primar Recuperare, Medicină Fizică și Balneologie, doctor în Medicină, Universitatea Ovidius Constanța, Facultatea de Medicină, S.B.R.Techirghiol

“Critical review on scientific visibility of studies realised in Balneal and Rehabilitation Sanatorium of Techirghiol”

Autori: O. Surdu, M. Surdu, L.E. Stanciu, M. Minea

Sunday, 29.06.2014

10⁰⁰ – 13⁰⁰ Session IV „Afecțiuni reumatologice – actualități și perspective de tratament balnear”

10⁰⁰ – 10²⁰ Drd. Minea Mihaela medic specialist reumatolog, medic specialist Recuperare, Medicină Fizică și Balneologie, S.B.R.Techirghiol

„Registrul de evidenta a pacienților cu boli autoimune actualități și perspective”

Autori: M. Minea, D. Oprea

10²⁰ – 10⁴⁰ Dr. Oprea Doinița medic specialist reumatolog, doctor în Medicină, S.B.R.Techirghiol

“Prezentări de cazuri clinice – pacienți cu afecțiuni reumatologice tratați în SBRT”

Autori: D. Oprea, M. Minea

10⁴⁰ – 11⁰⁰ Dr. Viorica Marin, medic primar Recuperare, Medicină Fizică și Balneologie, doctor în Științe, S.B.R.Techirghiol

“Influența terapiei cu nămol asupra statusului hormonal al pacienților cu afecțiuni reumatologice”

Autori: V. Marin, L.E. Stanciu, M. Minea, O. Surdu, T.V. Surdu

Mud therapy in the management of rheumatic diseases; our experience

Mine Karagülle, M. Zeki Karagülle, Istanbul Medical Faculty, Istanbul University

Mud therapy or peloidotherapy is used to treat various diseases; rheumatologic, gynecological, dermatologic, gastrointestinal disorders etc. It is mostly used for treating rheumatic diseases in Turkey, except using mud for skin care in some spas and beauty centers. We here summarize the results of our studies that aimed to investigate the therapeutic effects of mud therapy in the management of rheumatic diseases. In last five years (2008-2013) we conducted 6 studies to investigate the beneficial effects of mud therapy in rheumatic conditions. These rheumatic conditions are knee osteoarthritis (two studies), ankylosing spondylitis, rheumatoid arthritis, hand osteoarthritis and fibromyalgia. Peloid which was used for the mud therapy is a kind of clay contains mineral water. Patients who participated in the studies were recruited among the patients seeking medical advice in Outpatient Clinic of Medical Ecology and Hydroclimatology Department of Istanbul Medical Faculty. They were randomized to two groups with a computer in each study. Research procedures were set according to type of each disease. Temperature of mud pack and bath water, control groups, number of applications and application area defined depending on the affected joints and regions. Outcome measures were carried out by a blinded physician in defined measurement times (before the therapy week 0, just after therapy week 2, and follow up at week 12 and week 24). Results of studies were recorded and analyzed with SPSS statistical program by an independent investigator.

Ankylosing Spondylitis Study: Patients in Group 1 (bath therapy + mud therapy + home exercises) showed superior improvement on pain and Group 2 (supervised exercises + home exercise) had superior development of flexibility and mobility when compared each other.

Knee osteoarthritis Study 1: Patients in group 1 (traditional group, bath therapy + mud therapy, five times per week for 2 weeks) and patients in group 2 (bath therapy + mud therapy two or three times weekly for four consecutive weeks) showed similar improvements in the both patient groups with knee osteoarthritis.

Knee osteoarthritis Study 2: Patients in Group 1 (mineral water bath + mud therapy) and group 2 (tap water bath + mud therapy) showed statistically significant improvement on pain and WOMAC parameters besides Group 1 showed significant improvement on HAQ and SF-36 parameters at the end of therapy period and at week 12 follow up when compared to baseline.

Fibromyalgia Study: Group 1 (bath therapy + mud therapy; five times a week for two weeks) and group 2 (bath therapy + mud therapy; intermittently) had a total of 10 treatments. Both of the continuously or intermittently applied therapy programs were found effective in the fibromyalgia patients. For some parameters evaluating like pain and fatigue intermittent treatment was seemed to be superior to continuous one.

Hand Osteoarthritis Study: Group 1 (local balneotherapy of hands with thermo mineral water at 38⁰C) and Group 2 (mud therapy applied locally at hands at 42⁰C) were assessed for pain, grip strength by hand dynamometer and hand functional indexes. Two groups showed similar improvements after therapy period and it lasted up to 6 months in both groups.

Rheumatoid Arthritis Study: Group 1 (mud pack therapy + conventional medication for RA) showed superior improvement on pain and HAQ compared to Group 2 (control group with only conventional medication for RA). The results indicated that mud therapy relieved pain and improved quality of life in short and middle term up to 12 weeks. We concluded that it might be an effective adjuvant therapy for rheumatoid arthritis patients.

Conclusion: These results we obtained in our studies testing the mud therapy or peloidotherapy alone or in combination with bath therapy for rheumatic conditions indicate that it can be used as an effective non-pharmacological therapeutic modality in the management of various rheumatic diseases.

One-year effectiveness of mud-bath therapy in knee osteoarthritis

Antonella Fioravanti, Nicola Antonio Pascarelli, Chiara Giannitti, Mauro Galeazzi - Rheumatology Unit - Department of Medicine, Surgery and Neurosciences, University of Siena, Siena, Italy; Giovanni Bacaro - CNR –IRPI Perugia (Italy)

Objective: To assess both the short-term and the long-term effectiveness of spa therapy in patients with primary knee osteoarthritis (OA) in a prospective, randomised, single blind, controlled trial.

Materials and methods: 103 outpatients with OA of the knee according to the ACR criteria (1) were enrolled. Patients were randomized 1:1 and allocated into two groups: 53 patients (Group A) received in addition to usual treatment (exercise, NSAIDs and/or analgesics, established SYSADOAs) a combination of daily local mud-packs applied on both knees for 20 min at an initial temperature of 45°C and bicarbonate–sulphate–calcic mineral bath water at 38°C for 15 min, from the spa centre of Chianciano Terme (Siena, Italy) for 12 applications carried out over a period of 2 weeks. 50 patients (Group B, controls) continued routine ambulatory care. Clinical assessments were performed at basal time after 2 weeks, after 3, 6, 9 and 12 months – end of the study. The primary outcome criteria were the change from baseline to month 12 in WOMAC - Total Pain Score (W-TPS) (range 0-20)* and in WOMAC – Total Physical Function Score (W-TPFS) (range 0-68)* scored by a 5-point Likert scale. A set of secondary outcomes was also assessed such as WOMAC Total Stiffness Score (W-TSS), Physical Component Summary (PCS) and Mental Component Summary (MCS) of SF-12 (ranges 0-100) and consumption of analgesic medications (paracetamol and/or NSAIDs).

Results: Ten patients (9.5%) withdrew from the study: 2 in the spa-group and 8 (16%) in the control group. The assessment of pain showed a very significant improvement ($p < 0.001$) in patients treated with mud-packs until 6 months and a less significant reduction ($p < 0.05$) after 9 and 12 months. The control group showed a significant improvement after 2 weeks and 3 months, however this improvement is less expressed than in group A. The differences between the two groups were significant already from 2 weeks and lasted during the follow-up. A similar trend was observed for the WOMAC - Physical Function in the group A, group B showed a significant worsening after 6 months persisting throughout the follow-up. The results obtained from the quality of life, SF-12 survey showed a significant improvement ($p < 0.001$) in Physical Component, persisting throughout the follow-up period in group A. No significant modifications were found in group B during the study period. On the contrary, significant improvement of the Mental Component Summary of SF-12 was shown at the end of the therapy in group A, but no significant differences were observed in the other time of the follow-up. These effects on pain and function were also confirmed by the observed reduction of symptomatic drugs consumption. Tolerability of spa therapy seemed to be good, with light and transitory side effects.

Conclusions: In conclusion our results, in keeping with other studies (2,3) confirm that the beneficial effects of mud-bath therapy in patients with knee OA last over time, with significant reduction on the painful symptomatology and a significant improvement on functional capacities and on quality of life. Spa therapy can represent a useful backup to pharmacological treatment of knee OA or a valid alternative for patients who do not tolerate pharmacological treatments.

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Peloid therapy in Poland: methods, effectiveness review of research

Jacek Chojnowski

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ABSTRACT

The main peloid occurring in Poland is peat (in Polish it is called borowina). Borowina is organic peloid which was created in natural environment and has curing effect. The process leading to creating borowina was action of microorganisms in anaerobic conditions and with excess of water. In Poland there are two types of borowina deposits:

- high type with high level of organic content (more than 95%), low level of mineral content and acid pH

- low type with high level of mineral content, low level of organic content (80-90%) and neutral or slightly alkaline pH.

The whole area of borowina deposits covers 3500 ha located all over the country. Their own borowina deposits are used in 14 thermal stations. The most famous of them are Kołobrzeg, Połczyn-Zdrój, Kamień Pomorski, Wieniec-Zdrój and Krynica.

The main organic ingredients of peat are: humic acids, waxes, resins and carbohydrates, proteins, alkaloids, enzymes, pectins.

Mineral ingredients of peat are: macro- and micro-ingredients.

The macro-ingredients are: chloride, sulphur, carbohydrates, calcium, magnesium, potassium, sodium and ferrum.

Micro-ingredients are: manganese, cobalt, zinc, bromine, iodine, fluorine, copper.

Therapeutic effectiveness of peat depends both on thermal and chemical conditions. Low thermal conductivity and relatively high heat capacity allow applying peat in overheating treatment. On the other hand, unique chemical properties of peat are the base of extra-thermal properties: anti-inflammatory, bacteriostatic, bactericidal, overheating, regenerating and endocrine.

Unprocessed peat is used in the form of thick poultice because of thermal conditions. Ground in a ball mill, homogeneous peat (peat paste) is applied in the form of thin poultice in body temperature. In this case chemical properties are used.

Peat is applied in the form of whole body poultice, partial poultice, bathing of whole body or only limbs and tampons. There are many papers about borowina published in Polish and international journals, a little of them a double blind, randomised study.

Basic Wellness Features and Some Related Actions Propensive Including for Active and Healthy Ageing

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Abstract

The current global financial crisis inevitably alters the quality of life of many individuals, mainly (but not exclusively) its fourth – after Guelfi – dimension: the economic one (a deeply intricate component). Under these conditions, we can only hope that the holistic and idealistic definition of health, adopted by the World Health Organization (WHO) more than 65 years ago, will keep its contemporaneity and applicability – from before the recession – at least in the more developed countries/economies.

This work presents a synthetic overview on the main issues related to the notion of quality of life, focusing on aspects connected to the medical specialties of Physical & Rehabilitation medicine and respectively, Gerontology & Geriatrics: the presence/absence of risk factors, (especially) the ones associated to the “civilization pathology”, wellness, the current thinking/ paradigm (integrating the medical and social models) of the WHO regarding human functioning, (di)stress – including its relationship to premature/ pathologic ageing – and the active prophylactic (relaxing, fitness/“mise en forme”/ anti-stress, maintaining/ re-performing of the work capacity, rejuvenation/ anti-ageing/ gero-prophylaxis) balnear therapy courses.

Evidence - based medicine for balneotherapy – from scientific approach to methodolatry

Olga Surdu^{1,2}, Traian – Virgiliu Surdu¹, Monica Surdu³, Liliana – Elena Stanciu², Viorica Marin², Sibel Demirgian², Daniela Profir²

1. Ovidius University of Constanta,
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3. Constantina County Clinical Emergency Hospital

"Evidence-based medicine is the conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients" (1996 David Sackett BMJ 312 (7023): 71–2). Evidence based medicine aims to bridge the gap between clinical practice and public health, between results of research and clinical application. It is a tool for decision makers to approve or not: diagnosis, investigations, therapies, based on mathematical estimates of the balance between benefit and harm and need high-quality research on population samples. Evidence-based health service is the practice of evidence-based medicine at the organizational or institutional level and tends to generate an increase in the competence of health service decision makers.

Levels of evidences. Level I: Evidence obtained from at least one properly designed randomized controlled trial. Level II-1: Evidence obtained from well-designed controlled trials without randomization. Level II-2: Evidence obtained from well-designed cohort or case-control analytic studies, preferably from more than one center or research group. Level II-3: Evidence obtained from multiple time series designs with or without the intervention. Dramatic results in uncontrolled trials might also be regarded as this type of evidence. Level III: Opinions of respected authorities, based on clinical experience, descriptive studies, or reports of expert committees.

Strength of recommendation. Level A: Good scientific evidence suggests that the benefits of the clinical service substantially outweigh the potential risks. Level B: At least fair scientific evidence suggests that the benefits of the clinical service outweighs the potential risks. Level C: At least fair scientific evidence suggests that there are benefits provided by the clinical service, but the balance between benefits and risks are too close for making general recommendations. Level D: At least fair scientific evidence suggests that the risks of the clinical service outweighs potential benefits. Level I: Scientific evidence is lacking, of poor quality, or conflicting, such that the risk versus benefit balance cannot be assessed. Clinicians should help patients understand the uncertainty surrounding the clinical service.

Effect of contrasting peloid application (Egyptian ancient method) on hormonal status

Traian – Virgiliu Surdu¹, Monica Surdu², Liliana – Elena Stanciu³, Viorica Marin³, Sibel Demirgian³, Daniela Profir³

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3. Constanta County Clinical Emergency Hospital

Aim: to determine variation of TSH and cortisol during contrasting peloid application.

Adaptive support of human body answer to stimulation produced by cold peloidotherapy is realised by hormones secretion and modulation of endocrine secretion in balneal conditions fixes this answer at least for 6 -9 months.

Materials and methods of work

Treatment applied: mud cold ointment, heliotherapy and immersion in salt lake of Techirghiol;

Inclusion and exclusion criteria were applied to the study plot;

Table level of cortisol and statistical analysis

	Before treatment (in)	at 24 hours after first application (24)	At the end of cure (fin)
Average plot±DS	13.68±6.34	13.94±6.00	11.52±4.10
Average subplot MB±DS	11.87±6.41	11.98±3.06	12.66±3.52
Average subplot SB ±DS	15.35±6.88	15.75±7.49	10.48±4.45
t-test p<0.05			
MB/CO		0.11	0.19
MB in/MB 24, fin		0.95	0.68
CO in/CO 24,fin		0.89	0.04

Table level of TSH and statistical analysis

	Before treatment (in)	at 24 hours after first application (24)	At the end of cure (fin)
Average plot±DS	1.98±1.72	2.32±1.15	3.14±1.79
Average subplot MB±DS	2.20±2.20	2.65±1.26	3.39±2.22
Average subplot SB ±DS	1.78±1.17	2.02±0.98	2.90±1.31
t-test p<0.05			
MB/CO	0.56	0.18	0.52
MB in/MB 24, fin		0.55	0.20
CO in/CO 24,fin		0.58	0.03

Cold mud ointment decreases statistical significant cortisol level (p=0.04) with 31.27% and increases TSH level with 36.8% (p=0.03).

THE THERAPEUTIC BENEFITS OF SAPROPELIC MUD FROM TECHIRGHIOL LAKE IN ALGIC POSTTRAUMATIC SYNDROME

Sibel Demirgian¹, Mihaela Minea¹, Liliana-Elena Stanciu¹, Olga Surdu²,

1. Balneary and Rehabilitation Sanatorium Techirghiol;
2. „Ovidius” University Constanta

INTRODUCTION: Algic posttraumatic syndrome or known as chronic regional pain syndrome (CRPS) is a multiple system dysfunction accompanied by severe pain, often chronic and disability can be triggered by a minor injury, which has fascinated and perplexed scientists and clinicians for years.

In algic posttraumatic syndrome there is no single pathophysiological mechanism to explain the diversity and heterogeneity of symptoms (such as edema, vasomotor disturbances, limited range of motion). Currently, several mechanisms are accepted to be involved in the appearance and development of this syndrome.

Pathophysiological mechanisms that underlying the appearance of CRPS include changes in skin innervations, central and peripheral sensitization, altered function of the sympathetic nervous system, low levels of circulating catechol amines, increased levels of inflammatory cytokines, genetic and psychological factors.

Recent evidence demonstrates that oxidative stress is associated with the appearance of clinical symptoms in patients with CRPS. However, the most important mechanism seems to be the inflammatory process, because all the classic signs of inflammation are evident in the early stages of CRPS.

MATERIAL AND METHOD: This research is based on the study of 41 patients who received complex balneal-physical-kinetic treatment in Balneal and Rehabilitation Sanatorium of Techirghiol, between 2010-2011.

Patients underwent the following treatment protocol: mud bath alternatively with salt bath (in the pool), two or three adjuvant electrotherapy procedures, one session of massage therapy and one kinetics session. Patients were assessed at admission and at the end of treatment Including and exclusion criteria were applied. Including criteria refers to traumatic conditions (fractures of limbs) and to stage of evolution (stage II). Exclusion criteria refers to cardiovascular conditions, other inflammatory diseases, cancers and organs failure that might forbid mud application. Pain was evaluating using VAS, the difference of oedema using the centimetre; with goniometer we measured the range of motion and the skin temperature with thermograph.

RESULTS: Because between the mean values of VAS, the difference of edema, the range of motion and the skin temperature, in admission, in the two groups are not statistically significant differences, we can say that physical therapy alone did not influence the clinical features in patients with algic posttraumatic syndrome.

CONCLUSIONS: We found that physical therapy, by itself, does not influence clinical features (pain, swelling, range of motion, temperature). The mean values of these clinical features, measured in admission, did not reveal significant difference between two groups, with or without physical treatment before the balneal cure.

PSYCHOMOTOR REHABILITATION'S WAYS TO PATIENTS WITH VERTEBRAL-MEDULLARY INJURIES

Mariana State,

Balneary and Rehabilitation Sanatorium of Techirghiol

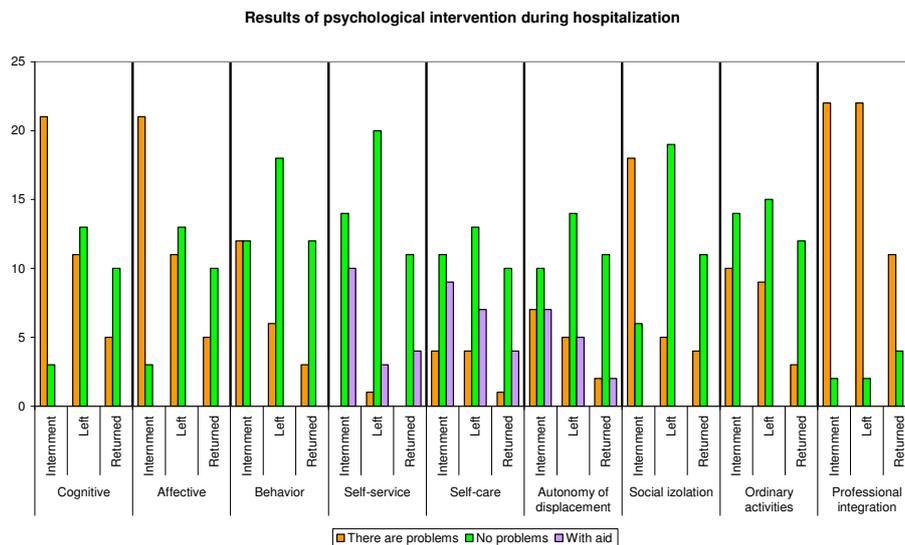
OBJECTIVES: *Psychological actions performance in psychomotor and social rehabilitation to persons with vertebro-medullary injuries using wheelchair.*

MATERIAL AND METHODS: *In this study we observed 25 persons. We made use of next methods:*

- The clinical interview that allows to collecting notes in how the individual relates to the situation, his emotional reactions, cognitive style, behaviors and defense mechanisms;
- Psychological Testing: Hamilton anxiety scale, Hamilton depression scale, an assessment Scale for cognitive defense mechanisms;
- Intervention techniques specific cognitive-behavioral psychotherapy.

RESULTS:

- patient participation and interest in recovery process, avoid physical and psychological consequences of the sub/super-involvement in recovery, avoid psychological consequences of unrealistic expectations, the expansion of the recuperatory orientation from physical size towards other dimensions: psychological, social; acceptance of their associative approach;
- awareness adaptive resources that are available to cope with difficulties;
- finding solutions to pass-over difficult problems;
- self-development abilities in mental status;
- forming of habits of "self".



DISCUSSIONS AND CONCLUSIONS: Vertebral-medullary injuries, by their consequences, introduce the subject into a new functional register. Psychological intervention with achieving objectives, improve the quality of life by adjustment to new conditions, involving the subject as active factor in this direction.

QUALITY POLICIES AT THE BALNEARY AND REHABILITATION SANATORIUM OF TECHIRGHIOL

Carmen Oprea, Liliana-Elena Stanciu, Vasilică Rusu, Elena-Valentina Ionescu

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INTRODUCTION: In the current globalization context, the sanitary management creates a real theoretical and practical interest for all the participants to the transition period experienced by the Romanian sanitary system in the alignment process with the European standards.

A competitive sanitary management involves economic efficiency and optimizing the satisfaction degree of both patients and employees, once data and information are analyzed.

OBJECTIVE: Comparative determining of the employees' satisfaction level in 2014 and 2012.

MATERIAL AND METHOD: The study was conducted on 160 employees of the Balneary and Rehabilitation Sanatorium of Techirghiol in 2012 and respectively 223 employees in 2014. Both inquiries were conducted during a four month period (January-April). A complex questionnaire was employed throughout this study including: knowledge of the hospital's structure and at least one of the hospital's quality objectives, prevention of nosocomial infections, rate of the nosocomial infections, department quality objectives, informatics system database, working conditions, professional satisfaction, appreciation regarding the earned salary, evaluating the protection equipment, reinstating the same working position, hierarchical manager's behavior.

RESULTS: The majority of the questions of the conducted inquiry revealed a growth of the global employees' satisfaction during 2014 as opposed to 2012. The question regarding the earned salary was the only one that presented an increased percentage of unsatisfied respondents (19% in 2014 and 17% in 2012).

CONCLUSIONS: The obtained data suggest that it is necessary an improvement of the communication level (concerning the medical assistants in particular), of the working conditions and of the protection equipment for the medical sector. In addition to these improvements, the growth of the monthly income for all personnel categories is also expected.

KEY WORDS: satisfaction, employees, questionnaire, medical.

EVALUATION OF THE EFFECTS OF TECHIRGHIOL SAPROPELIC MUD ON THE ADIPOKINES LEVELS IN OSTEOARTHRITIS

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INTRODUCTION: The obesity is considered to be a factor of risk for osteoarthritis. It is accepted as a fact that it contributes to the development and progress of osteoarthritis, by increasing the mechanical growth of the articulations. The obesity has an important impact, through its mechanical role, as well as through the variety of substances produced by the fat tissue. One of them is the adiponectin, broadly researched the last few years, gaining more and more important valences in the context of osteoarthritis.

OBJECTIVE: Determining the efficiency of the complex balneal-physical treatment through quantifying the variation of blood level of adiponectin after 10 days of treatment.

MATERIAL AND METHOD: The study was conducted on a batch of 23 patients, aged between 30 and 70, diagnosed with knee osteoarthritis, admitted in Balneary and Rehabilitation Sanatorium of Techirghiol. The blood level of adiponectin was measured using Elisa technique. All patients were evaluated both in the first day and after 10 days of balneal treatment (sapropelec mud as cold baths, mineral water from the lake, electro-therapy, massage, and kinetics). For the statistical analysis of the data, SPSS 12.0 program was used.

RESULTS: Following the applied 10 day treatment, adiponectin blood level increased not significantly. The obtained differences reveal in this case that the average value of adiponectin has increased compared to the initial moment (Adiponectin 10 > Adiponectin 1; M10 = 23.76, M1= 21.47).

CONCLUSION: The obtained data suggests that balneal-physical therapy influences the adipokines levels, and this aspect can be regarded as a step forward in discerning the osteoarthritis pathogenic mechanism.

KEY WORDS: adiponectin, knee osteoarthritis, balneal treatment, mud.

EVIDENCE REGISTER OF THE PATIENTS WITH IMUNOLOGICAL DISEASE - NEWS AND EXPECTINGS -

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KEY WORDS: chronic immunological inflammatory diseases, register for the patients, locomotor disabilities.

BACKGROUND: Ankylosing Spondylitis (A.S.), Rheumatoid Arthritis (R.A.) and Psoriatic Arthritis (Ps.A.) are chronicle inflammatory diseases, with different, various forms of severity and not rarely, they generate important locomotor disabilities.

OBJECTIVES: The aims of this study are to identify the patients with R.A., A.S., Ps.A. and to include them into a program of treatment closely supervised by the Rheumatologist.

METHODS: The project aims to create a link between the Physicians from S.B.R.T and the Rheumatologist from all the country. We intend to create in our centre an auto-immune disease register with previous medication (DMARDs / Biologic therapy). We also want to make a data base with specialist doctors from all over the country and take care of the patients through the treating doctor of the aria. The register will contain : passport data ,sending doctor , the date of the disease beginning ,the date of diagnostic setting, family diseases, previous therapy with: NSAID/CS/DMARDs/Biologic therapy, associated pathology, complications, presence or absence of inflammatory syndrome (VSH ,CRP ,FB.), Anti CCP ac., R.F./ HLA B27 , DAS 28/BASDAI scores. We have chosen to begin this project because 20,24% from the patient admitted in S.B.R.T. are found with inflammatory rheumatic diseases, 59,10% of them, having R. A. and 21,04% A. S. Inside the A.S. group we detected patients that had important locomotor disabilities. Between January 2013 and March 2014 we admitted in S.B.R.T. 36 patients with A.S., 20 of them diagnosed in our clinic and the other 16 acknowledging their disease. In the last group, only 10 had medication, 3 of them with biological therapy and the other 3 begun the treatment with anti TNF α . In the same time, among the patients with R.A. in 6 cases we initiated MTX and 2 of them were eligible for biological therapy.

CONCLUSIONS:

1. Autoimmune diseases are chronic inflammatory conditions in order to cause serious locomotor handicap. The patients with locomotor disabilities acknowledge in a higher or a lower rate the inconsistent treatments and the low frequency of their visits to the physician, in their medical history.

2. Assembling an Evidence Register of Patients with Autoimmune Diseases, in order to achieve a real connection between the patients and the Phisicians of both S. B. R.T. and other Rehabilitation Centres in the country with the Rheumatologists in the territory, will represent a step forward in our quest to fight against the apparition and, at least, to prevent the aggravation of the locomotor handicap for patients with P.R., S.A. and A.Ps.

PHYSIOLOGIC AND THERAPEUTIC EFFECTS DETERMINED BY THE BIOCHEMICAL COMPONENT OF TECHIRGHIOL SAPROPELIC MUD

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INTRODUCTION: The saprogenic mud consists of black deposits rich in colloidal hydric sulfide iron, found in the bottom of salty lakes and seas, formed by the action of micro-organisms from the inorganic substance found in the soil, the flora and fauna in the aquatic basin, as a result of biological and chemical transformation that occurred during the ancient times.

The chemical composition of the saprogenic mud includes: water, mineral and organic substances. The water represents 70% from the mud's components and it is found as occlusion water, hydrating water, crystallization water or osmotic water. Mineral substances are: insoluble salts (sulfate and calcium carbonates, silicates); the clay component (SiO_2 and small quantities of oxides); the colloidal component (hydric sulphide iron, iron and aluminum silicates, organic-mineral complexes). Organic substances originate from the fito-zooplacton of the aquatic basin, from vegetal remains and decomposed animals. These are represented by carbohydrates (cellulose and hemicelluloses), humic acid and its salts, lipids, proteins and amino-acids, the B group vitamins, nicotinic acid, a bituminous component which contains estrogen-like active substances.

The active chemical components of the saprogenic mud spread throughout the body, either by passing through the skin barrier or by entering directly into the bloodstream, depending on the routes of administration, causing functional local and general reactions, inhibiting or activating some enzymatic systems or intermediate metabolites.

AIM: To determine the variations of Ca^{2+} , Mg^{2+} , Cl^- , K^+ , Na^+ , HCO_3^- , total Ca^{2+} value, total Mg^{2+} value, Ca/Mg ratio, during mud application.

MATERIALS AND METHODS: In order to determine the impact of the mud's ionic changing propriety on acid-base homeostasis and ionic balance, we measured the blood variation of Ca^{2+} , Mg^{2+} , Cl^- , K^+ , Na^+ , nCa, nMg, the Ca/Mg ratio, HCO_3^- and pH before the mud treatment, immediately after the first bath, next day and in the end of the 12 days treatment. The study was conducted on a sample of 44 patients (14 male and 30 female).

Following the principles of evidence-based medicine, the collected data were recorded and tabulated, and then the measures of central tendency (average, module, median) and the dispersion parameters (standard deviation) were calculated. The results are shown in diagrams.

RESULTS AND CONCLUSIONS: Synthesizing the data referring to the variation of the plasmatic ions during the treatment, considering the type of the first administration, it was concluded that first 24 hours are the most strenuous for the body. Comparatively to the initial average measures, calcemia, Ca/Mg ratio and potasemia have decreased, magnesemia has increased, while calcium and sodium ions did not show any variations.

PHYSIOLOGIC AND THERAPEUTIC EFFECTS DETERMINED BY THE BIOPHYSICAL COMPONENT OF TECHIRGHIOL SAPROPELIC MUD

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INTRODUCTION: The saprogenic mud consists of black deposits rich in colloidal hydric sulfide iron, found in the bottom of salty lakes and seas, formed by the action of micro-organisms from the inorganic substance found in the soil, the flora and fauna in the aquatic basin, as a result of biological and chemical transformation that occurred during the ancient times.

Techirghiol mud is an alkaline mud with 8, 2 pH, with a density value of 1,283 g/cm³. The plasticity of the mud is the capacity of changing its form in time under the action of an external force. The coefficient of flowing is 43-56% (a medium value). The spreading capacity (the degree of dispersion) depends on the size of the mud granules and for the Techirghiol mud represents 99,57%. The termopexy consists in the capacity of absorption and retaining of the warmth (confers the therapeutic value to the mud), and it is the most important feature, along with the spreading. It is determined by the Benade method.

AIM: The paper intend to synthetize the mechanisms by which physical characteristics of Techirghiol saprogenic mud act upon whole body and the therapeutic effects following mud application.

MATERIALS AND METHODS: An overview upon speciality papers and monographs written during last years about peloids and, especially, about the saprogenic mud from Techirghiol Lake.

CONCLUSIONS: The therapeutic effects of mud application are due to two factors: thermic and mechanic. The effects are according to the temperature of the mud: the warm application (38°C) decreases pain, reliefs muscles contracture and has anti-inflammatory effects; the hot application (40-41°C) has immune-stimulating, tonic, cardiovascular overwork effects. The mechanic factor it is active in the mud bath and during the immersion in the lake. The effects are a decrease of the body weight (according to Archimedes's Law), and an optimization of the return blood flow (according to Pascal's Law).

THE INFLUENCE OF MUD THERAPY ON HORMONAL STATUS IN PATIENTS WITH RHEUMATOLOGICAL CHRONIC INFLAMMATORY DISEASES

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INTRODUCTION: Ankylosing spondylitis is a chronic progressive inflammatory rheumatic disease that involves the back, i.e. the spine and sacroiliac joints. The disease typically begins in adolescence and young adulthood, and only rarely does it begin after the age of 45 years. Over many years, AS can result in gradually progressive stiffness and limitations of spinal mobility and also restricted expansion of the chest.

AIM: The study aims to evaluate the variation of stress hormones after mud therapy (cold or warm application) in patients with ankylosing spondylitis, to establish certain correlations between the hormonal status and the anti-inflammatory action of mud and so to point out the important role of mud therapy in slowing down the progression of the disease.

MATERIALS AND METHODS: The studied group included 25 patients (17 male and 8 female), with ages between 40-65 years old, diagnosed with ankylosing spondylitis (using modified New York criteria). For 13 patients the prescribed treatment consisted in cold mud ointment and for the other 12 patients in warm mud baths. In order to form the group we used inclusion and exclusion criteria. All patients received mud and physical therapy and no medication. The patients were evaluated using clinical exam and laboratory tests in three different moments: first day after admission, 24 hours after first mud application and after 2 weeks of mud therapy. We determined the variation of serum levels for cortisol, TSH, and usual acute phase reactants as ESR, leucocyte number. All blood measurements have been performed in the analysis laboratory of the sanatorium.

RESULTS: Serum levels of cortisol vary in different ways, concordant with the type of mud application, but none of it statistically significant. TSH increased statistically significant in the end of treatment, especially after cold mud applications. In case of inflammatory markers significant changes can be seen in variation of leucocyte number after cold mud ointment.

CONCLUSIONS: It seems that peloidotherapy has an anti-inflammatory effect on patients with ankylosing spondylitis by changing the balance of hormonal status and so has a positive influence on progression of the disease.

BALNEAL AND REABILITATION SANATORIUM TECHIRGHIOL - REFERENCE NATIONAL AND INTERNATIONAL MEDICAL UNIT FOR ROMANIAN BALNEOLOGY

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INTRODUCTION: 115-years balneal tradition in Techirghiol

AIMS: This scientific paper aims to highlight the main therapeutic sources used within SBRT, the main medical scientific events during which the Techirghiol sapropelic mud has been therapeutically promoted, how SBRT has succeeded over the years to remain among the first medical units of its kind in Romania.

MATERIALS AND METHODS: Reviewing the specific literature about Techirghiol as balneal resort and about Balneal and Rehabilitation Sanatorium in Techirghiol, researching on the continuous development of this Romanian balneal resort within the current economical context, and promoting the balneal resources from Romania nationally and internationally.

RESULTS:

- Health promoting natural factors: the environment, the sapropelic mud and the salty water of the lake.

- The legend: the lake became famous after Techir, a crippled blind old man, got into the water of the lake together with his donkey. After spending a few hours in the water, he realized that he had regained his eyesight and his legs were no longer crippled. The news about the miracle spread rapidly, and people everywhere came to bathe in "Techir's lake"- the current Techirghiol Lake.

- 1560 - first documentary reference; 1854 - first written information about the therapeutic effects of the lake waters; 1891 - first "establishment of balneal destination"; 1972 - setting up of the Techirghiol Balneal Sanatorium.

- Currently one of the most modern balneal treatment clinics in the country, following a continuous process of modernization and improvement of the medical services quality.

- The therapeutic properties of the natural factors have been proven by rigorous research studies, the results of the studies being shared during medical congresses, both nationally and internationally, by the doctors of the SBRT research nucleus. The research activity is intensive and continuous, due to the current medical tendency to evidence-based medicine - from scientific approach to methodolatry.

CONCLUSIONS: SBRT is a landmark medical unit of Romanian balneology, where, over the years, the history of the medical establishment has been respected by the nowadays specialists, who are trying to maintain an exceptional standard through their studies and medical activity.

PHYSIO-PATHOLOGICAL IMPLICATIONS OF TECHIRGHIOL SAPROPELIC MUD IN GERIATRIC PROPHYLAXIS.

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INTRODUCTION: 115-year balneal tradition in Techirghiol, the sapropelic mud being one of the health-promoting natural factors of this resort. Geriatric prevention is a medical subject that deals with the treatment of the aging population and its pathology.

AIMS: This scientific paper aims to identify the therapeutic properties of the sapropelic mud with physio-pathological implications in gerontology prophylaxis, the mud therapy representing a practical healthy-aging solution.

MATERIALS AND METHODS:

- Reviewing the current medical information of the respective medicine with implications upon the main theories on the aging process and the physio-pathological links on which the Techirghiol sapropelic mud has its action.
- The methodology of applying a study initiated within the Techirghiol Sanatorium (SBRT), as a “knowledge brick” of the aging process.

RESULTS:

-There are more than 300 theories which try to explain the aging process from the biological, but also social perspectives. The most scientifically based biological theories of the aging are: the evolution, molecular, cellular, systemic theory (Neural Endocrine and Immunological). The basis of the neural endocrine theory consists of the fact that none of the components of the human body can act in an isolated manner from the nervous and endocrine systems.

- The aging represents the expression of a functional progressive lack of balance of the neural endocrine system, throughout which the hormonal secretions suffer important modifications, the most involved in this process being the sexual glands which secrete ovary hormones (estradiol) and testicle hormones (testosterone), the adrenal gland (cortisol) and the pituitary gland (GH). Most of the references from the specialized literature are addressed to the endocrine component responsible for the secretion of estradiol and testosterone, under the influence of the central nervous system, diencephalon, pituitary and gonadal glands.

CONCLUSIONS: The mud therapy, having noble Romanian roots, represents a new medical perspective in health consolidation, in the human body longevity, in gerontology prophylaxis, and in the healthy-aging medicine.

PRESENTATIONS OF CLINICAL CASES - PATIENTS WITH RHEUMATIC DISEASES TREATED AT THE BALNEARY AND REHABILITATION SANATORIUM OF TECHIRGHIOI

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INTRODUCTION: Ankylosing Spondylitis (AS) is a chronic inflammatory disease that predominantly affects the spine but also the peripheral joints, the main feature of the disease being the early alteration of the sacroiliac joints.

Biologic therapy is a type of pharmacological treatment recently introduced in the management of patients with active and severe types of Rheumatoid Arthritis (RA), Psoriatic Arthropathy (PsA) and Ankylosing Spondylitis (AS), which are resistant to standard therapy, with documented efficiency and safety in clinical trials.

CASE STUDY PRESENTATION: We report the case of 3 patients, hospitalized in the SBRT, diagnosed with axial Ankylosing Spondylitis, and who are in a late stage of the disease with radiographic and clinical changes of the spine (changes in the statics and dynamics of the spine), requiring a maximum dose of NSAIDs and who started the biological therapy with anti TNF α .

A clinical and para-clinical evaluation was conducted for each patient before starting the biologic therapy and after 12 weeks of biologic therapy.

CONCLUSIONS: The anti TNF α treatment represented the therapeutic solution of maximum efficiency from a clinical and biological point of view and it stopped the radiological development of the disease for each of the three patients.

KEYWORDS: Ankylosing Spondylitis, biological therapy, anti TNF α treatment.

Techirghiol mud and new perspectives for healthy ageing

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Abstract: “To be forever young doesn’t mean to be 20. It means to be optimist, to feel good, to have an ideal to fight for and to achieve it” said Prof. Ana Aslan. Human ageing and longevity are complex and multi-factorial traits that result from a combination of environmental, genetic, epigenetic and stochastic factors. Unlocking the capacity to manipulate human ageing would result in great health benefits. Currently, health is understood as the removal of diseases in a defensive manner to the pathological process and with higher costs. Understanding how the environment modulates ageing-related genes may lead to human applications and disease therapies through diet, lifestyle, or pharmacological interventions.

Lifespan extension possibility was demonstrated for many geroprotector substances: Gerovital prepared by Ana Aslan, resveratrol, Rapamycin, antioxidants, hormones, bioregulatory peptides, metformin, fenformin and adaptogens (ginseng). As mechanisms have been observed reduced plasma levels of insulin, increased insulin receptor sensitivity, low body temperature, cholesterol, triglycerides, alpha-lipoproteins, blood pressure. All these processes are correlated with the expression of genes called sirtuins. Among the many hormones with geroprotector effects, estrogen-like or testosterone-like substances, detected also in the organic component of therapeutical peloids, stimulate or inhibit various neuroendocrine mechanisms.

Free radicals are continuously produced in the human body, as they are essential for energy supply, detoxification, chemical signaling and immune function. Reactive oxygen species have been found to play an important role in the initiation or progression of various diseases such as atherosclerosis, inflammatory injury, cancer and cardiovascular disease. An imbalance between antioxidants and reactive oxygen species results in oxidative stress, leading to cellular damage. Air pollutant such as car exhaust, cigarette smoke, and industrial contaminants constitute major sources of ROS that attack and damage the organism.

Herbs, diet, lifestyle, and supplements can slow ageing, enhance memory, help prevent cancer and heart disease. Medicinal plants (many used as spices and food plants) contain organic compounds as tannins, alkaloids, carbohydrates, terpenoids, steroids and flavonoids, which produce physiological effects. Antioxidants intervene in gerossuppression based on the ageing free radical theory. Resveratrol present in grapes and subsequently in red wine, is a natural phytoalexin used by certain plants in the defense mechanism against pathogens. Resveratrol caused a statistically significant decrease of age-related parameters such as albuminuria, inflammatory level, vascular endothelial apoptosis, and the incidence of cataract, at rats.

Peloids used also in the treatment of various rheumatic, endocrine, dermatological or gynecological diseases, represent the support for the design of new geroprotectors. "Peloidextract" obtained from Techirghiol mud is a clear liquid, with an alkaline pH of 7.6 to 8, and mineral content closely comparable to that of blood serum. Humic compounds play a role in redox reactions, absorption, complexation and transport of substances. Humic acids have an astringent effect, anti-allergic, antiviral, antibacterial, anti-inflammatory, estrogenic, hyperemic, UV-protective and are heavy metal chelating-agents. Fulvic acids have antitumoral, anti-allergic, antioxidant and antimicrobial activity, acting in acid medium by inhibiting mitochondrial respiration in *Candida utilis*, have antiulcerogenic and precognitive properties so they can be used to treat Alzheimer's disease.

