The benefits of thermal spas have been recognized from early times. Balneotheraphy is dependent on the chemical and mineral structure of water and certainly on the level of absorption. Finding the optimal ratio between amount of these natural substances and general reactivity of the patient is the most important aspect of balneotherapy. The balneotherapeutic applications for different illnesses and injuries and certainly contributes towards psychophysical relaxation of patients. The healing properties of the deep thermal water at Ilidza has been recognized since the Romans and Turks. The same thermal spring and sulfur water with the temperature of 57.5 °C has been in use for at least 2000 years. According to the balneological classification this water is classified as hydro carbonate-sulfur-chloride-sodium type, with acid mineral level of 3400 mg/L and the temperature of 58 °C.

The other components of this water are sulfate 573 m/L and sulfate 10.6 m/L. The radioactivity is 0.3–0.9 Bq/L; the Ra 226 level is 3 μCi/L and there is 500 mg/L of carbon dioxide. The sulfur water has beneficial effect on connective tissue, blood flow, metabolic processes, airways and skin. The sulfur water has a wide spectrum of therapeutic application from rheumatic, skin, chronic non-specific gynecological illnesses, metabolic disturbances to musculoskeletal and peripheral nervous system injuries, and heavy metal poisoning.

The balneological as we know today in this region has been established at the Institute in 1950. Institute has been located at Ilidza (1967–1992), but completely devastated during the war. In 2006, the reconstructed part of the Institute has been reopened at Ilidza. The large number of patients who have been successfully treated with balneotherapy at this Institute in the past is certainly the best evidence that we needed to further improve this service. There is a need for expansion of the current capacities in order to provide the level of care for our patients. The future goals are to preserve the thermal and sulfur water resources with the regular analysis of water quality together with further development of tourist and hospital capacities near these resources.


P098–EN

**Treatment of chronic low-back pain with postural sagittal brace (LORDACTIV)**

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**Keywords:** Low-back pain; Orthosis; Posture; Lordosis; Sagittal balance

**Introduction.**—In common back pain, the need to limit discovevertebral discomfort without restricting the patient’s activities leads to the development of braces targeted on the sagittal balance: trunk retroposition, limitation spinal flexion, maintaining lordosis without stress on facet joints. The four clinical studies and experiments presented here confirm the usefulness of this approach.

**Objectives.**—Clinical, radiological, and postural validation of a retroposition trunk brace with standing lordosis (LORDACTIV).

**Methods**

**Clinical.**—One hundred and thirteen chronic low back pain patients with degenerative lumbar pain (56F/57H) average pain since 8 months, average age 42 years wearing the brace 8 h per day for 1 month.

**Spinal measure.**—Flexion of the spine and coxofemoral diseases in 39 lumbar degenerative with and without orthotics.

**Posture.**—Eleven degenerative disc diseases on force platform with and without orthosis.

**Radiology.**—Four cases with study of sagittal angular parameters with and without orthosis.

**Results.**

**Clinical.**—Mean decrease ofVAS in 4 weeks: 80%.

**Spinal measure.**—Average restriction of spinal flexion: 63%.

**Posture.**—Significant reduction of shifting the center of pressure in the anteroposterior axis, significant reduction in time to postural correction.

**Radiographs.**—Alignment of the sacred slope and lordosis with angle of incidence.

**Discussion and conclusion.**—These results confirm the importance of sagittal balance in degenerative lumbar disease, which requires a brace with priority action restricting spine bending and maintaining support of the lumbar lordosis, and this action is best achieved with the orthosis LORDACTIV, allowing continued activity, a fundamental element in the fight against the transition to chronicity.


P099–EN

**Spinal pain and post poliomyelitis syndrome**

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**Keywords:** Pain of rachis; Biometric factors; Post poliomyelitis factors

**Introduction.**—The incidence of post-polio syndrome is not well known, as well as the prognostic factors. We believe that 30–65% of old poliomyelitis patients are concerned.

Spinal pain is quite frequent and disabling for these patients. To better assist these patients, we have attempted to understand the relationships existing between spinal pain and socio biometric factors.

**Materials and methods.**—45 patients presenting with spinal pain related to poliomyelitis were recruited and followed in the PRM outpatient consultations. The results of the physical examination and complementary explorations were recorded. Variables examined including VAS, fatigue Borg scale, weight, height, and social variables were collected for the period 2009–2011. The objective was to search for significant correlations between spinal pain and biometric factors.
Results.— For the 45 patients, average age was 40 years, average weight 81 kg, BMI 25.6, average age of occurrence of poliomyelitis 3 years earlier, 55% have a medium or primary level education, 49% without employment, most were civil servants, 51% had medical histories, 51% had undergone poliomyelitis surgery. 

Pain.— The incidence of spinal pain was 35% (16/45), 21 patients had pain; 76% of them spinal pain. Among the five quantitative variables (age, BMI, weight, height, walking distance), none were correlated with the presence of spinal pain. Those with amyotrophy had less risk.

Discussion and conclusion.— In this preliminary study, correlation with the biometric factors was not found, in agreement with the results of other authors. Some variables were related to spinal pain, such as the absence of amyotrophy.

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P100-EN

Chronic low back pain and obsessive compulsive disorder: Union is strength

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Keywords: Chronic low back pain; Multidisciplinary rehabilitation treatment; Mental disorders; Obsessive compulsive disorder; Cognitive Behavioral Therapy; Care network

Introduction.— Mrs H, aged 44, was referred to the multidisciplinary pain consultation for chronic low back pain. The multidisciplinary assessment pointed out the recent decompression of an obsessive compulsive disorder (OCD), physical deconditioning and occupational distress. The psychological data collected from the patient revealed a vicious circle between job stress, ritual washing after work and aggravation of painful experiences. The proposed treatment plan was directed primarily towards cognitive behavioral therapy (CBT) focusing on OCD then in a second step on a multidisciplinary rehabilitation treatment. The objectives of the CBT were workplace stress management and progressive reduction of washing time.

Observations.— After 6 months these goals were achieved. However, the patient expressed a complaint about her body image, an experience of disability and the persistence of a kinesiophobia limiting her leisure. To achieve these new objectives Mrs H was included in the rehabilitation dynamic program for chronic low back pain proposed by the rehabilitation center. Five weeks of comprehensive care, continuing work on thought about pain and including in particular: psychotherapy, occupational therapy and balneotherapy to enable gradual resumption of sports and leisure activities.

Conclusion.— CBT focusing on pain occupies a central place in the management of patients with chronic low back pain. However, participation in such work is difficult for people with comorbid psychiatric disorders. Psychotherapy focusing on the psychopathology appears as a precondition to a comprehensive management of pain. Collaboration and exchanges between multidisciplinary teams promote the positive development of chronic low back pain centers.


P101-EN

Biomechanical evaluation after a “Light” Functional Restoration Program (FRP) in chronic low back pain

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Keywords: Functional Restoration Program; Chronic low back pain

Introduction.— Low back pain is a cause of chronic disability, resulting in disruption of employment activities [1]. Intensive Functional Restoration Program (FRP, 5 days/week for 5 weeks) facilitate motor improvement and return to work [2]. The benefits of a short FRP (“Light FRP” 1 whole day/week during 5 weeks), are unknown.

Methods.— Open-label study of 23 patients with chronic low back pain underwent “Light FRP”, consisting of stretching, cardiopulmonary and lumbar-pelvic complex motor training, and proprioceptive and ergonomic spine exercises. Clinical parameters (ie. cardiopulmonary capacity, muscle length and endurance, as well as quality of life) and biomechanical parameters (ie. walking speed and spinal postures) were measured before and after “Light FRP”.

Results.— The “Light FRP” was associated with improvements in spinal extensor extensibility (+10 cm, P < 0.01) and maximal thoracolumbar flexion (+7%, P < 0.03), abdominal (+65%, P < 0.05) and spinal muscle (+30%, P < 0.04) endurance, cardiopulmonary capacity (maximal power on cycloergometer, +29%, P < 0.01), load-lift capacity (+84%, P < 0.01), spontaneous (+20%, P < 0.01) and maximal (+4%, P < 0.04) walking speed and quality of life (QUEBEC [3], HAD-Anxieté [4], P < 0.01).

Conclusions.— This study suggests significant improvement of functional and capacities motor and quality of life in patients with chronic low back pain after a “Light FRP”.

References


P102-EN

Radiographic assessment of lumbarpelvic sagittal alignment in sitting position: Preliminary study

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Keywords: Lumbar spine; Sagittal alignment; Low back pain

Background.— Prolonged sitting with spinal flexion has been linked to low back disorders including at work [1]. Sitting in combination with other co-exposures such as vibrations and awkward posture increases the association with low back