Proceedings European Geothermal Congress 2007
Unterhaching, Germany, 30 May – 1 June 2007

THERMAL TREATMENT IN PATIENTS WITH RHEUMATIC DISEASES IN FELIX SPA ROMANIA

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ABSTRACT

The aim of the study was to point out the beneficial role of thermal treatment in Felix Spa in patients with rheumatic diseases.
Material and method. 142 patients with rheumatic diseases underwent inpatient thermal treatment for 18 days including: hydrotherapy, hydrokinetotherapy. They were assessed with HAQ questionnaire(Health Assessment Questionairre) at baseline and discharge. Effects were analysed with sensitivity statistics(effect size, ES).

Results..Both the pain and the disability scales improved at discharge.

Conclusion. Thermal treatment in Felix Spa has a beneficial role in improving health status in patients with rheumatic diseases.

INTRODUCTION

Felix Spa is an old, wellknown resort in NV part Romania.It is the largest spa Romania's. It belongs to the vastest geothermal area of the country. It lies in the Northwestern part of Romania, 9 km away from Oradea and 20 km from the Hungarian border. Located in the Crisurilor Plain, in a hilly region covered by beech and oak woods, at an altitude of 140m, Felix Spa attempts all the requirements of a blessed health resort. The climate is mild both in summer and in winter; the yearly average temperature is +10 ºC(average temperature is -2ºC in January and +20.4ºC in August). The precipitations are few, the weather is stable, so the people's acclimatisation raises no problem.

The earliest document that mentions Felix Spa "Termae Varadiensis" dates back to 1221. The great humanist Nicolaus Olahus praised the healing powers of these thermal waters in his work in 1536. Later, between 1700 – 1721, Felix Heldres discovers the Felix Springs and gives it a good therapeutical use. The Spa will gradually grow and be known as "Felix Spa" after his name. The first analysis of the Felix thermal mineral waters composition was performed in 1731 and it still proves accuracy.

The existence and the development of Felix Resort is bound to it's main natural factor – the thermal springs existent in the area. It is also linked to the beneficial effects of the geothermal waters for people's health, well known and certified along many centuries.

AIM OF THE STUDY

The aim of the study was to point out the beneficial role of thermal treatment in Felix Spa in patients with rheumatic diseases.

MATHERIAL AND METHOD

Felix Spa is a large resort. It has more than 7,200 beds, of which 5,750 in 12 hotels ranging from 1 to 3 stars and about 1,450 beds in villas of different comfort levels. Each hotel has its own treatment facilities. There is also a Physical Rehabilitation Clinic with 150 beds.
From ancient times there were cured a lot of diseases here.
The most important diseases treated here are:

- rheumatic diseases(degenerative, inflammatory, abarticular),
- some neurologic diseases,
- posttraumatic affections,
- metabolical ilnesess(like obesity),
- endocrine ilnesess(like hypotiroidia),
- for prophilaxy. .

The main natural terapeutical factor is the mineral geothermal water.
Its content in minerals is:

- The concentration of total dissolved solids (TDS) is up to 1,300 ppm, mostly calcium-

sulphate-bicarbonate type, the main elements present being Ca, Mg, Na, K, Li, Mn, Fe.

- There are also small quantities of dissolved non-condensable gasses (up to 200ppm) mainly CH4 and CO2 (Cohut and Tomescu, 1993). A very small content of 222Rn (about 23 – 70 pCi/l) makes the geothermal water undrinkable in general, but also strongly contributes to its therapeutic effect in health bathing.
- The geothermal water from the Felix Spa reservoires is neutral (pH 6 at 20°C).

We studied 142 patients with rheumatic diseases. All of them underwent inpatient thermal treatment for 18 days including: hydrotherapy, hydrokinetotherapy in Felix Spa, Romania. The patients fulfilled the ACR criteria for rheumatic diseases. (Hochberg MC, Chang RW, Dwosh I, Lindsey S, Pincus T, Wolfe F:- *The American College of Rheumatology 2002 revised criteria for the classification of global functional status in rheumatoid arthritis.*-Arthritis Rheum 2002)

Patients were recruited from SC Turism Felix SA, Romania. They underwent inpatient rehabilitation treatment for 18 days including: hydrotherapy, hydrokinetotherapy, electrotherapy, kinetotherapy, thermotherapy and massage.
They were assessed with HAQ questionnaire at baseline and at discharge. Effects were analysed with sensitivity statistics(effect size, ES).
The inclusion criteria were:

1. age over 18 years;
2. fulfilling the ACR criteria for rheumatic diseases;
3. posibility of evaluation and reevaluation at baseline and discharge;
4. complying with the principles of medical ethics.

The exclusion criteria:

1. age under 18 years
2. others severe diseases
3. non compliance

The characteristics of the group were**:**

1. Age between 35 – 79 years;
2. Ratio women/men of 77/65
3. The interval between the diagnosis and the beginning of the treatment had a mean of 6.5 month;
4. The following up period of 18 days.

The Health Assessment Questionnaire (HAQ) was originally developed in 1978 by James F. Fries, MD, and colleagues at Stanford University. It was one of the first self-report functional status (disability) measures and has become the dominant instrument in many disease areas, including arthritis. It is widely used throughout the world and has become a mandated outcome measure for clinical trials in rheumatic diseases. (aramis.stanford.edu) The HAQ was developed as a comprehensive measure of outcome in patients with a wide variety of rheumatic diseases, including rheumatoid arthritis, osteoarthritis, juvenile rheumatoid arthritis, lupus, scleroderma, ankylosing spondylitis, fibromyalgia, and psoriatic arthritis.. Its focus is on self-reported patient-oriented outcome measures, rather than process measures. Over the last 2 decades, assessment of patient health status has undergone a dramatic paradigm shift, evolving from a predominant reliance on biochemical and physical measurements to an emphasis upon health outcomes based on the patient's personal appreciation of their illness. The Health Assessment Questionnaire (HAQ), published in 1980, was among the first instruments based on patient centered dimensions. The HAQ was designed to represent a model of patient oriented outcome assessment and has played a major role in diverse areas such as prediction of successful aging, inversion of the therapeutic pyramid in rheumatoid arthritis (RA), quantification of nonsteroidal antiinflammatory drug gastropathy, development of risk factor models for osteoarthrosis, and examination of mortality risks in RA. The HAQ has established itself as a valuable, effective, and sensitive tool for measurement of health status. It has increased the credibility and use of validated self-report measurement techniques as a quantifiable set of hard data endpoints and has contributed to a new appreciation of outcome assessment(aramis.stanford.edu).

The ability to effectively measure health-related quality-of-life is central to describing the impacts of disease, treatment, or other insults, including normal aging, upon the patient. Assessing these outcomes requires instruments that are comprehensive, reliable, valid, responsive, and those that have been stable for a sufficient length of time to permit longitudinal study. Such measures are particularly significant in studies where short term results are not the primary outcomes of interest, but can be of use over periods as short as six weeks.

The version that has received the widest attention, most frequent use, and what is commonly referred to in the literature as "the HAQ," is the "short" or "2-page" HAQ. The 2-page HAQ contains the HAQ Disability Index (HAQ-DI), the HAQ visual analog (VAS) pain scale.

The HAQ Disability Index (HAQ-DI). The disability assessment component of the HAQ, the HAQ-DI, assesses a patient's level of functional ability and includes questions of fine movements of the upper extremity, locomotor activities of the lower extremity, and activities that involve both upper and lower extremities. There are 20 questions in eight categories of functioning which represent a comprehensive set of functional activities – dressing, rising, eating, walking, hygiene, reach, grip, and usual activities. The stem of each item asks over the past week "Are you able to …" perform a particular task. The patient's responses are made on a scale from zero (no disability) to three (completely disabled).

The HAQ VAS Pain Scale. The HAQ pain scale is designed to assess the presence or absence of arthritis-related pain and its severity. The objective is to obtain information from patients on how their pain has usually been over the past week, even though pain may be reported to vary over the course of a day or from day to day. The HAQ pain scale consists of a doubly anchored, horizontal VAS, that is scored from zero (no pain) to three (severe pain), or alternatively from 0 (no pain) to 100 (severe pain). The VAS for pain has been used widely in experimental, observational, and clinical settings .

How is the HAQ Disability Index (HAQ-DI) and pain scale scored?The HAQ-DI indicates the extent of the respondent's functional ability.It assesses a patient's usual abilities using their usual equipment during the past week. Scoring of the HAQ-DI is patterned after the American Rheumatism Association/American College of Rheumatology functional classes. For each item, there is a four-level difficulty scale that is scored from 0 to 3, representing normal (no difficulty) (0), some difficulty (1), much difficulty (2), and unable to do (3). There are 20 questions in eight categories of functioning – dressing, rising, eating, walking, hygiene, reach, grip, and usual activities. The highest component score in each category determines the score for the category, unless aids or devices are required. The eight category scores are averaged into an overall HAQ-DI score on a scale from zero (no disability) to three (completely disabled) (Bruce B and Fries JF, The Stanford Health Assessment Questionnaire (HAQ): A Review of Its History, Issues, Progress, and Documentation. *J Rheumatol*. 2003;30(1):167–78).

How are the HAQ-DI scores interpreted?Scores of 0 to 1 are generally considered to represent mild to moderate difficulty, 1 to 2 moderate to severe disability, and 2 to 3 severe to very severe disability. Average scores that have been reported in a population-based study are 0.49, and in osteoarthritis and rheumatoid arthritis patients are 0.8 and 1.2, respectively. (Bruce B and Fries JF, The Stanford Health Assessment Questionnaire (HAQ): A Review of Its History, Issues, Progress, and Documentation. J Rheumatol. 2003;30(1):167–78.).

A variety of responsiveness statistics are available.Usualy, the responsiveness to health status instrument has been compared using the effect size (ES).
ES equals the mean change in score divided by the standard deviation of the baseline scores. It relates the change to the initial variation in scores. A higher ES indicates a higher responsiveness. An ES of 0.2 is considered a small beneficial effect, 0.5 a moderate effect and 0.8 a large effect to treatment.(Kazis ES, Anderson JJ, Meenan RF, - *Effect sizes for interpreting changes in health status.* Med. Care 1999; S178 – 89.)

RESULTS:

The outcome measures were the HAQ scales for pain and function at the day of entry(baseline examination), at the discharge (after three weeks).

-A total of 142 patients with rheumatic diseases were referred to rehabilitation inpatient program between 2004 – 2006 in SC Turism Felix SA, Romania. All of them fulfilled the ACR inclusion criteria for rheumatic diseases. The mean age of the patients was 61.2 years; 77 subjects were female (54.22%) and 65 males (45.78).

- Pain ES=0.72 at discharge;
- Function ES=0.52 at discharge.

DISCUSSIONS**:**

- The above study was an observational follow up study for patients with rheumatic diseases undergoing a three weeks rehabilitation intervention in Felix Spa.
- There are several randomised clinical trials that have shown the beneficial effect of inpatient rehabilitation on patients with rheumatic diseases.
- Only a few studies have investigated whether the effects are sustained over time.
- In our study we found a larger improvement in pain reduction than in physical function.
- The effect in physical function was a moderate.
- The ES at the end of the rehabilitation program were comparable to those reported in clinical trials with exercise therapy.
- The inpatient rehabilitation programs are more expensive than outpatient exercise programs.
- There are some patients who need more safety comprehensive inpatient rehabilitation – those with comorbidities like coronary heart disease, pulmonary diseases, obesity and s.o.
- Also elderly patients with severe osteoarthritis, especially those living in in rural areas are unable for an outpatient treatment.
- The decision for treatment as inpatient rehabilitation should be made individually, according to each patient's evaluation.

CONCLUSIONS

Our study showed the beneficial effect of the rehabilitation treatment for patients with rheumatic diseases.
It seems that pain improves more than physical function.
However, even a slower deterioration in physical function represents a gain for desabilitating disease.
Thermal treatment in Felix Spa has a beneficial role in improving health status in patients with rheumatic diseases.

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