STROKE TREATMENT IN A HEALTH RESORT

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HEALTH RESORT: MULTIDISCIPLINAR CONCEPT

THERAPEUTIC ATTITUDE:

Healthy Habits (Education and Primary or Secondary Prevention)

Pharmacology  Rehabilitation

Medical Hydrology: Balneotherapy / Hydrotherapy/Thalassotherapy/Climatology

- Particular climatic conditions
- Traditional application of muds (Mar Menor) and 5 Thalasso Health Resorts.
- Sanitary Regulation of spas and medical service.
- UCM, UM studies. UCAM.
NEUROLOGY & THALASSOTHERAPY

• 1 Neurological diseases are NOT a traditional indication of balneology (neither thalassotherapy)
• 2. Has been considered in certain cases a classic contra-indication (acute vascular process, MS ...)
• 3. There are no publications on this field
1- Water-based exercises are used in rehabilitation and might help to increase functionality after stroke in terms of ICF (International Classification of Functioning, Disability and Health)

- 3-Paizan NL et al.. Hidrotherapy: coadjuvant treatment to kinesiotherapy in patients with sequels after stroke. Rev Neurocienc 2009; 17: 314-318
2- Balneotherapy publications with significant improvements in pain, quality of life, joins flexibility (mainly in Rheumatologic deseases) and others


Huge heterogeneity: there are many different rehabilitation approaches to improve disability after stroke and protocols differ from country to country or even region to region (practice guidelines…)

{No one approach to physical rehabilitation is any more (or less) effective in promoting recovery of function and mobility after stroke}

There is a lack of previous studies of Thalassotherapy in stroke treatment, but you find literature about cardiology and immersion or neurology in water training.


Enriched life, scandinavian concept for stroke rehabilitation, based in:

1. High Intensity (physical activities)
2. The earlier, just the better… (neuroplasticity)
3. Nice environment (motivation)
4. Individualized training skills and goals.


STROKE TREATMENT IN THALASIA (Thalasso Center)

OBJECTIVE

To assess the effects of Thalassotherapy on the balance, functional capacity, pain and wellbeing of people with post stroke
STROKE TREATMENT IN THALASIA

MATERIAL & METHOD I

Open-label trial: one centre, before-and-after test.

**Inclusion criteria:**
- stroke
- Clinically stable

**Exclusion criteria**
- Rankin 4 or more (disability)
- Co-morbidity associated that might influence on training or thalasso tolerance

**Sample:** 90 participants recruited in Sweden from all around the country (2011-2014)
The program consist in 2 or 3 weeks:

1. Aquatic therapy in a warm sea water pool based on Halliwick method for 45 minutes a day, 5 days a week.
2. Thalasso treatment during 30-45 minutes a day, 2 days a week.
3. Mediterranean climatotherapy and exposure to sun (Heliotherapy) and open air (- ionization)
4. Intensive physical therapy on land; 1h/ 5 days/week (individual)
5. Speech therapy, neuropsychology and specific cognitive training.
6. Relaxation (group) 2h/week.
7. Health education (lectures 2h/week).
8. Aerobic exercise on land or water (30 min, group).
9. Social activities (games, wii..)
10. Occupational therapy (hotel, market…) and family training.
SPA THERAPY APPLICATION

BATHS
SHOWERS AND JETS
MUDS
MASSAGE UNDER WATER (VICHY)
The outcomes measured were:
1- Balance & fall risk: Berg Balance scale
2- Physical Functional Capacity: 6 min walking test (6MWT) (ICF Activity Domain)
3- Pain: VAS
4- Wellbeing index: WHO 5

These assessment were performed before and after intervention at Thalasia (Spain).

Statistical analysis: student t test (SPSS18). Statistical significance was set at p < 0.05
RESULTS I

- Mean age: 63; 51% Male; 86% Chronic; 76% Ischemic

<table>
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<tr>
<th>Paired Differences</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
<th>95% Confidence Interval of the Difference</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
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In order to monitor possible changes in wellbeing, the percentage score is used. A 10% difference indicates significant change.

STROKE TREATMENT IN THALASIA

RESULTS III

- Significant improvement in static balance and functional mobility ($t= 9.242$, $P=0.000$); Risk of fall from moderate (21-40) to mild (41-56)
- Significant improvement in functional capacity ($t=4.602$, $p=0.000$)
- Significant subjective improvement in pain ($t=2.764$, $p=0.009$) and wellbeing, overall perceived quality of life.
CONCLUSIONS

• Thalassotherapy in a health resort may improve balance, functionality and wellbeing or pain after a stroke (quality limitations)

• There is a lack of evidence for spa therapy after stroke (neurological diseases). Better studies are therefore required, control group and larger follow up is the challenge of the experimental group.
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GRACIAS