Spa therapy for lumbar spine osteoarthritis

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Osteoarthritis

- the most common form of arthritis in the World
- Over one-half of all people older than 65 show OA-associated changes in the knees.
- After age 75, almost everyone has these changes.

Peyron JG. 
Epidemiologic and etiologic approach to Osteoarthritis. 
Semin Arthritis Rheum 8; 288-306, 1979
Osteoarthritis

- Patients with OA have pain that typically worsens with weight bearing and activity and improves with rest.
- As well as morning stiffness and gelling of the involved joint after periods of inactivity.
Causes of OA are not completely understood

- biomechanical stresses affecting the articular cartilage and subchondral bone
- biochemical changes in the articular cartilage and synovial membrane
- genetic factors

all important in its pathogenesis
Areas that Osteoarthritis Affects

- most often at the ends of the fingers, thumbs, neck, lower back, knees, and hips
Classification Criteria for Osteoarthritis

American College of Rheumatology

- Hand
- Knee
- Hip
- Spine ???
ACR OA GUIDELINES 2000 THE HIP AND KNEE Nonpharmacologic therapies

- Patient education
- Self-management programs (e.g., Arthritis Foundation Self-Management Program)
- Personalized social support through telephone contact
- Weight loss (if overweight)
- Aerobic exercise programs
- Physical therapy
- Range-of-motion exercises
ACR OA GUIDELINES 2000 THE HIP AND KNEE Nonpharmacologic therapies

- Muscle-strengthening exercises
- Assistive devices for ambulation
- Patellar taping
- Appropriate footwear
- Lateral-wedged insoles (for genu varum)
- Bracing
- Occupational therapy
- Joint protection and energy conservation
- Assistive devices for activities of daily living
The goals of OA treatment

- Reduce pain
- Relieve symptoms
- Maintain and/or improve joint mobility
- Limit functional impairment
- Minimize disability
Goals of balneotherapy for arthritis

- Improving range of joint motion
- Increasing muscle strength
- Eliminating muscle spasm
- Enhancing functional mobility
- Easing pain
Balneotherapy for lumbar OA
Observational study

- Effect on osteoarthritis of spa therapy at Bourbonne-les-Bains
- 21-day course of spa therapy; daily sessions of balneotherapy and physiotherapy
Quality of life was markedly decreased as compared to the population at large (1996, CFES). The two pretreatment evaluations produced similar quality-of-life scores. Spa therapy was associated with significant improvements in overall quality of life ($P=0.004$), self-esteem ($P=0.009$), and pain ($P=0.01$).
These findings support those of other studies conducted in France and in other European countries.

They indicate that patients report meaningful improvements in their quality of life after spa therapy.
Balneotherapy for lumbar OA

RCT

- Prolonged effects of 2 week therapy in a spa resort on lumbar spine, knee and hip osteoarthritis: follow-up after 5 months. A randomized controlled trial, M. NGUYEN, M. REVEL and M. DOUGADOS British Journal of Rheumatology 1997;36:77-81
Changes in the assessment criteria after a 5 month follow-up period showed improvement in terms of pain, functional impairment and quality of life, with a reduced intake of symptomatic drugs "NSAID and analgesic drugs in the spa group,
Prolonged effects of 2 week therapy in a spa resort on lumbar spine, knee and hip osteoarthritis: follow-up after 5 months. A randomized controlled trial, M. NGUYEN, M. REVEL and M. DOUGADOS

*British Journal of Rheumatology* 1997;36:77-81

- This study suggests that spa therapy of 2 weeks duration has a prolonged beneficial symptomatic effect in (lumbar spine) osteoarthritis.
Spa therapy for lumbar spine OA in Turkey

- We aimed to determine the effectiveness of spa therapy in short and long term on functions and pain, in patients with lumbar spine OA.
Study design

- Randomized
- Controlled
- Single blind
- Follow up 3 months
Study Groups

- Balneotherapy group (n:20)
- 2-week stay at Gönen Spa Hotel

- Balneotherapy + exercise therapy group (n:24)
- 2-week stay at Gönen Spa Hotel
## Patients

<table>
<thead>
<tr>
<th></th>
<th>Balneotherapy and exercise (n=24)</th>
<th>Balneotherapy only (n=20)</th>
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<tbody>
<tr>
<td>Female/Male</td>
<td>17/7</td>
<td>15/5</td>
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<tr>
<td>Age (year) (SD)</td>
<td>64,7 (±11,3)</td>
<td>61,7 (± 9,4)</td>
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<tr>
<td>Duration of Disease (year)(SD)</td>
<td>9,9 (± 7,3)</td>
<td>11,6 (± 7,7)</td>
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<td>Duration of pain (month) (SD)</td>
<td>2,3 (± 1,0)</td>
<td>2,4 (± 1,2)</td>
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<td>ESR (mm/h) (SD)</td>
<td>19,2 (± 11,4)</td>
<td>16,8 (± 8,0)</td>
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Balneotherapy Group

- Thermomineral water (Na, SO$_4$, HCO$_3$, Cl, F)
- Bath in thermal pool at 36-37°C, for 20 min, once a day, total 12-14 baths
- Bath in tub, at 38°C, for 20 min, once a day, total 12-14 baths
Balneotherapy+Exercise Group

- Bath in thermal pool at 36-37ºC, for 20 min, once a day, total 12-14 baths
- Bath in tub, at 38ºC, for 20 min, once a day, total 12-14 baths
- Williams exercises; every day 15 minutes duration
Outcome measures

- Pain (VAS)
- Patient’s global assessment (VAS)
- Doctor’s global assessment (VAS)
- Health assessment questionnaire - HAQ
- WADDELL
- Finger-floor distance
- Schober index
Assessments

- Before spa therapy
- After spa therapy (within a week)
- At 3. month follow-up
Significant reduction was seen in Pain VAS scores in both groups.
Patient’s global assessment (VAS)

- Significant reduction was seen in both groups.
Doctor’s global assessment (VAS)

Significant reduction was seen in both groups.
Significant reduction was seen in both groups.
Improvement (not significant) in balneotherapy+exercise group at the end of spa therapy and significant improvement at 3. month.

Significant improvement in balneotherapy group at the end of spa therapy and at 3. month.
Significant reduction was seen in both groups.
Improvement in both groups at the end of spa therapy and at 3. month, but significant only in balneotherapy + exercise group at 3. month.
Conclusions

- Both of 2 week-spa therapy were effective in reducing pain and improving function and spinal mobility and flexibility in patients with lumbar OA.
Conclusions

- The significant improvement, seen in Schober Index at 3 month in balneotherapy + exercise group was probably related to the added exercise therapy.
Conclusions

- Spa therapy combining balneotherapy and exercise therapy had advantage over sole balneotherapy in improving mobility and flexibility in patients with lumbar spine OA.
Conclusions

- However, it is needed further well designed randomized controlled trials with a higher number of patients with a sufficient power to show the superiority of combined spa therapy over mono balneotherapy for lumbar OA.
Further Perspectives

We need further Workshops;

to improve mobility and flexibility and
to show the superiority of combined belly dance therapy
Thank you !!

Çeşme, Izmir for the 4th Turkish Hungarian Balneology Workshop