Outcome of physiotherapy as part of a multidisciplinary rehabilitation in an unselected polio population.

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The Danish Society of Polio- and Accident Victims

The Multidisciplinary team in PTU
- Doctors
- Physical therapists
- Technical aids therapists
- Social workers
- Physiotherapy assistants
- Psychologists
- Dietician
- Orthopedic technician
Aim of the study

First aim
• To describe the problems of patients with late effects of polio who were referred to the Rehabilitation Centre for the first time

Second aim
• To describe outcome of physiotherapy as part of a multidisciplinary rehabilitation and the results of the intervention after 3 months and at one year follow up
Methods

Design
• Prospective uncontrolled intervention study

Included patients
• 50 polio survivors who contacted our clinic for the first time were included and they were tested three times:
  ➢ 1. test – Baseline – before treatment
  ➢ 2. test – 3 months after start of treatment (47)
  ➢ 3. test - 15 months after start of treatment (46)
Outcome measures

3 Questionnaires
- Short Form-36
- Multidimensional Fatigue Inventory-20
- Polio questionnaire

4 Functional Capacity Tests
- 6 min Walk Test
- Timed Stands Test
- Functional Reach test
- Stair Climbing Test

Registration of individual physiotherapy treatments
Description of the 50 participants

- **Gender**
  - 30 Women
  - 20 Men

- **Age**
  - 58 years (24-82 years)

- **Native country**
  - 40 Denmark
  - 10 other countries

- **Occupation**
  - 23 still working
  - 27 retired

- **Year of polio onset**
  - Between 1930-1985,
  - 20 persons in 1952/53

- **BMI**
  - 28 (20-60)
    - 18 persons – normal weight
    - 20 persons – obese
    - 11 persons – very obese
Major problems

- Outdoor walking
- Climbing stairs
- Fatigue
- Pain
- Anxiety for future
- Acceptance of new situation

Low values in:
- All functional capacity tests
- The first 5 dimensions in SF-36
- More fatigue
The common treatment for polio patients at PTU

- Exercising
- Reduction of pain
- Energy management
- Technical aids
- Counseling
- Polio Education
- Specialists
## Individual treatments used in the study

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual exercise</td>
<td>37 patients</td>
</tr>
<tr>
<td>Massage</td>
<td>36 patients</td>
</tr>
<tr>
<td>Stretching</td>
<td>33 patients</td>
</tr>
<tr>
<td>Pain treatment</td>
<td>21 patients</td>
</tr>
<tr>
<td>Home exercise programme</td>
<td>33 patients</td>
</tr>
</tbody>
</table>
Fitness centre - 42 patients
Group gymnastics - 2 patients
Warm water exercising - 22 patients
Polio education programme - 35 persons
## Number of individual treatments

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physiotherapy treatments</td>
<td>15 times</td>
<td>3 times</td>
<td>41 times</td>
</tr>
<tr>
<td>Number of weeks with physiotherapy</td>
<td>14 weeks</td>
<td>3 weeks</td>
<td>39 weeks</td>
</tr>
</tbody>
</table>
## Continued exercising

<table>
<thead>
<tr>
<th>Activity</th>
<th>After finishing physiotherapy</th>
<th>After 15 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group gymnastics</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Fitness centre</td>
<td>42</td>
<td>22</td>
</tr>
<tr>
<td>Warm water</td>
<td>22</td>
<td>12</td>
</tr>
<tr>
<td>Exercising elsewhere PTU</td>
<td></td>
<td>22</td>
</tr>
<tr>
<td>No exercise</td>
<td></td>
<td>8</td>
</tr>
</tbody>
</table>
### Contact with other professionals

<table>
<thead>
<tr>
<th>Professional</th>
<th>Contact Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social worker</td>
<td>15</td>
</tr>
<tr>
<td>Psychologist</td>
<td>3</td>
</tr>
<tr>
<td>Technical aids therapist</td>
<td>20</td>
</tr>
<tr>
<td>Doctor – in addition to the first consultation</td>
<td>12</td>
</tr>
<tr>
<td>Dietician</td>
<td>8</td>
</tr>
<tr>
<td>Orthopedic technician</td>
<td>25</td>
</tr>
</tbody>
</table>
Results

SF -36

0 = Low quality of life     100 = high quality of life

Physical functioning
Role limitations due to Physical problems
Bodily pain
General health
Vitality
Social functioning
Role limitations due to Emotional problems
Mental health

1.test mean
2.test mean
3.test mean
Ref values
Results

MFI - 20 Fatigue
0 = Not tired  100 = Very tired

- General Fatigue
- Physical Fatigue
- Reduced Activity
- Reduced Motivation
- Mental Fatigue

1. Test mean
2. Test mean
3. Test mean

Reference Values

Post polio conference,
Copenhagen aug 31 - sept 2
Susse Broberg
Results

6 min. Walk Test

![Graph showing 6 min. Walk Test results for Baseline, After 3 months, and After 15 months for Polio Group and Reference Values.]
Results

Technical aids - 12 persons
Results

Timed Stands test

![Graph showing Timed Stands test results. The graph compares baseline, after 3 months, and after 15 months. The Polio Group's performance is indicated by blue diamonds, and the Reference Values are represented by pink bars. The graph shows a decrease in seconds over time.]

Post polio conference,
Copenhagen aug 31 - sept 2
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Conclusion

First Aim
• The patients with late effects of polio had a lower level of functioning, experienced more fatigue and had more pain compared to values for the Danish population

Second Aim
• The patients, who experience a decline in physical capacity, can benefit from an individually planned multidisciplinary intervention with emphasis on physiotherapy
  • The patients show better functional capacity on all measurements
  • They experience improvement in general health
  • They experience less pain and less physical fatigue
• The improvements in physical capacity and general health remains at the one year follow up
Thank you for listening…