Summary

Objective: To perform an observational study on children and adolescents with chronic complaints under treatment with “biophoton therapy”.

Methods: Twenty patients between 1 and 18 years of age were included, with complaints that have already lasted for at least three months, interfere with the patient’s normal daily routine, can be self-identified and are not (per se) associated with a medical diagnosis. A questionnaire specially developed for this purpose was used before treatment and 3 months after beginning of treatment, testing for the categories: “Sleeping problems”, “Energy problems”, “Bowel/abdomen problems”, “Ear, nose and throat problems” and “Skin problems”, “Other problems”. The questionnaire was filled out by the parent(s) in all cases. Biophoton therapy, as applied and investigated in this study, starts from personalisation based on measurements of skin resistance/conductivity in selected areas of the body. From this “diagnosis”, the experienced therapists deduced therapy needs. The trial was set up as an open, not controlled, not randomised, observational study.

Results: Before treatment, 133 chronic complaints were reported, i.e. an average of 6.7 complaints per individual. After the treatment, only 10 (7.5%) were reported any longer, i.e. 0.5 per patient. In other words, after 13 weeks, 92.5% of the chronic complaints had disappeared. Differences before and after treatment were statistically significant (p < 0.01). There were no differences as to gender or age.

Conclusion: Chronic complaints among children and adolescents, being defined as having had a previous duration of 3 month minimum, diminished significantly within the 3 months course of the study. We can at present not attribute exactly the contribution of the personalised therapeutic interaction and the influence of the biophoton device on the treatment success.

Introduction

Biophotons and claims of biophoton treatment

Biophotons were at first described by the Russian biologist Alexander Gurwitsch [1]. In experiments with onions, he described very weak light emission. His findings were forgotten until the work of Colli and Facchini was published in 1954 [1], who measured light emission from plants. The measurements of Quickenden (1967) at the University of West Australia contributed to the general acceptance of...
biophotons [2]. The German physicist F.A. Popp determined the spectrum of the emission to range from 200 to 800 nm, and he measured intensities of only at few quanta per second per cm². Popp proposed that these emissions consisted of coherent light (similar to lasers). Today it is generally accepted that biophotons are weak emissions of light radiated from the cells of all living systems.

All organisms, including plants, constantly produce photons as part of their vital activities [3-7]. The light of the photon is too faint to be seen by the naked eye. Its intensity can be compared to the light of a candle seen from a distance of 20 km. Photons have been detected and verified by using a photomultiplier.

The “Biophoton therapy device” used in this study was designed as a non invasive therapeutic tool. According to the manufacturer the treatment strategy is based on the following principles [9]:

• Every living cell emits its own characteristic light pattern.
• When a cell is healthy, it emits coherent light and when diseased, it emits chaotic light.
• Every biochemical reaction is preceded by an electromagnetic signal, the Biophoton, that steers the chemistry of the cell with certain information.
• Biophotons provoke up to 100,000 chemical reactions per second per cell.
• When the steering signal within the cell is inadequate, the biochemistry does not work properly and the cell will show certain symptoms of disturbance.

A key idea is that photon patterns within structures of the organism are primary steering elements of all biochemical and biological interaction. Balanced structures are said to emit phase coherent, unbalanced structures phase chaotic light [3-8]. The Biophoton therapy device is claiming to, in case of need, “correct the steering signal”, which in turn regulates the cells’ biochemistry. According to J. Boswinkel, such photon patterns may be scanned by devices containing one-way fibre glass cables, filters, amplifiers and elements for phase correction, and may be fed (back) to the biological system [9].

Because biophoton based therapies have repeatedly been reported to ameliorate chronic complaints [personal communications], the authors were interested to apply biophoton based diagnosis and therapy on children with chronic complaints. The intention of this study is to approach the issue from a phenomenological point of view, i.e. to perform an observational study that would or would not reveals benefits to the patients, regardless of whether or not we understood the functions principles of the “biophoton therapy device”.

**Chronic complaints in children**

The Central Bureau of Statistics (CBS), Netherlands, reports that one in five children aged 4-12 years suffer from a chronic disease or disorder [10]. In the Netherlands this amounts to about 270,000 children in this age group. According to the Emma Kinderziekenhuis [children’s hospital] AMC Amsterdam, a total of 500,000 children suffer from chronic diseases or disorders [11,12]. In this pilot study, we investigated the potential of the biophoton therapy device for treatment of chronic complaints in children and adolescents and thus the possible improvement of health and the
quality of life of these children.

Methods

Patients

Twenty patients between 1 and 18 years of age were included (with an average age of 9.5 years), of which 40% females and 60% males.

To differentiate between incidental complaints and chronic complaints, and for clear definition of terms throughout the study we defined the study group using the following inclusion criteria:

- The complaint has already lasted for three months or more
- The child / adolescent is not using any drugs and/or is not under any other treatment
- The complaint occurs frequently, i.e. daily or at least several times a week
- The complaint interferes with the normal daily routine
- The complaint can be self-identified and is not (per se) associated with a medical diagnosis

All participants completed the treatment plus the post treatment period, i.e. adherence was 100%.

Assessment by questionnaire

To measure the complaints and their implications, we used a questionnaire specially developed for this purpose, inspired by [10], testing for the categories: “Sleeping problems”, “Energy problems”, “Bowel/abdomen problems”, “Ear, nose and throat problems” and “Skin problems”. The questionnaires provided room for comments and included a blank category named “Other problems” to document any other complaints not included in the original list.

Possible answers to the frequency of occurrence of the complaints were: “never”, “sometimes”, “regularly”, “often” and “always”. Complaints that are only experienced “sometimes” are interpreted as complaints that occur on an irregular basis and thus were rated as incidental (and not chronic) complaints. When under “Other problems” a clinical diagnosis was given instead of a complaint, this was omitted. Reasons for participant exclusion were that reported complaints were not prevalent for long enough (i.e. 3 month minimum) to qualify for “a chronic condition”. Type and frequency of the chronic complaints experienced can be used as a parameter for health and quality of life [13,14]. The questionnaire was filled out by the parent(s) in all cases.

Assessment by “biophoton device”, information on biophoton therapy

Biophoton therapy, as applied and investigated in this study, starts from personalisation based on measurements of skin resistance/conductivity in selected areas of the body [9,15]. From this “diagnosis” (i.e. not from the assessment by questionnaire, see above), the experienced therapist will deduce therapy needs. Both this assessment and therapy are done with the help of the biophoton device (Fa. Boswinkel), while there is no further physically tangible treatment, such as with drugs,
herbs or any other substances. Treatment with the biophoton device requires a very personalised relationship to the patient.

**Design of the study**

The trial was set up as an open, not controlled, not randomised, observational study. Chronic complaints and their frequencies were reported by the child’s parents before treatment (baseline) and after treatment, the intermediate time being about thirteen weeks (*figure 1*). In both cases, the questionnaire was handed to the parents to be filled out at home.

![Study design diagram](image)

Biophoton therapeutic treatment including 2 or 3 sessions (for an average of 2.6 sessions) was done in the first two weeks of the thirteen-week period by either of two experienced biophoton therapists (R.E. and P.W.). Assessment was repeated after each treatment to determine necessity of treatment repetition.

**Handling and evaluation of data**

The participant identification parameter and the variables were entered into a computer based databank. To minimise data transfer errors all data were compared with the source documents before the data set was closed, and then subjected to statistical analysis. The frequency of the single complaints before and after treatment plus post treatment period were compared with the help of a matches sample (paired) t-test. The error probability (p-value) to reject the null hypothesis (i.e. the hypothesis that there was no beneficial effect) was 0.05.

**Results**

From the 20 children and adolescents involved, before treatment, 133 chronic complaints were reported, i.e. an average of 6.7 complaints per individual. Frequencies of complaints can be seen in *figure 2* (dark columns).

After the treatment plus post treatment period, from all 133 chronic complaints at baseline, only 10 (7.5%) were reported any longer, i.e. 0.5 per patient. In other words, after 13 weeks, 92.5% of the chronic complaints had disappeared. Furthermore, 6 of the persisting complaints improved with regard to frequency (figure 2, light columns).
Table 1 shows the number of complaints for the single categories before and after treatment.

<table>
<thead>
<tr>
<th>Category of problems</th>
<th>female</th>
<th>male</th>
<th>total</th>
<th>percent resolved</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>before</td>
<td>after</td>
<td>before</td>
<td>after</td>
</tr>
<tr>
<td>Sleeping</td>
<td>7</td>
<td>0</td>
<td>11</td>
<td>0</td>
</tr>
<tr>
<td>Energy</td>
<td>11</td>
<td>1</td>
<td>15</td>
<td>2</td>
</tr>
<tr>
<td>Bowel/abdomen</td>
<td>11</td>
<td>0</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>Ear, nose, throat</td>
<td>9</td>
<td>0</td>
<td>16</td>
<td>3</td>
</tr>
<tr>
<td>Skin</td>
<td>5</td>
<td>0</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>17</td>
<td>2</td>
<td>14</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>60</strong></td>
<td><strong>3</strong></td>
<td><strong>73</strong></td>
<td><strong>7</strong></td>
</tr>
</tbody>
</table>

Table 1. Amount of chronic complaints per categories before and after treatment.

Differences before and after treatment plus post treatment phase were statistically significant (p < 0.01). There were no differences as to gender or age.
Discussion

Chronic complaints among children and adolescents, being defined as having had a previous duration of 3 month minimum, diminished significantly within the 3 months course of the study. The majority of complaints were completely resolved or significantly ameliorated.

We can at present not attribute exactly the contribution of the personalised therapeutic interaction and the influence of the biophoton device on the treatment success. Thus, results of this open, not controlled, not randomised observational study may be interpreted along two main lines.

Psychological effects

The treatment with the biophoton device requires a very personalised relationship to the patients. In view of the overwhelming study result, this relationship and the attention provided may be an important factor contributing to the treatment success.

Physiological effects

However, in order to investigate possible biological effects of treatment with the biophoton device, further studies were performed:

In a study with wheat seedlings, germination rate in the group treated with a “harmonising” biophoton programme was 16.8% stronger than (i.e. equal to 116.78% of ) control germination rate (100%) (p < 0.01) [16].

In a study on milk ageing, souring of milk in the group treated with the “harmonising” programme was 16.7% less strong than (i.e. equal to 83.3% of ) souring of control (100%) (p < 0.01) [17].

In a study on aggregation of erythrocytes, aggregation of red blood cells in the group treated with the “harmonising” programme was 97.8% (!) less marked than (i.e. 2.2% of ) aggregation of control (100%) (p < 0.01) [18].

In a study on rat cortical neurone synaptic development, synaptic size in the group treated with the “harmonising” programme was 19% greater (i.e. equal to 119% of ) than control (100%) (p < 0.01) [19].

The authors of these studies concluded that information produced by or transferred via the biophoton device can influence biological systems in a physiological way.

Further recommendations

This pilot study has to be repeated, including a larger number of participants and including further therapists, before its results can be generally accepted.

From an ethical point of view, with regard to the observed patients’ improvement, using a randomised control group and a blinding procedure seems problematic, even if this would be of high academic interest.
References


