

Homeopathic Treatment of Multimorbid Patients: a Prospective Outcome Study with Polarity Analysis

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Summary

The treatment of multimorbid patients who have three or more complaints in combination is one of the core competences of homeopathy. In this article we introduce the application of Polarity Analysis (PA) in multimorbidity. PA has been invented during the rigorous Swiss homeopathic ADHD double blind study, a trial which resulted in a significant difference between highly diluted homeopathic remedies and placebo. This scientific success was possible only thanks to the new method of case analysis. PA allows to calculate a relative healing probability for each possible remedy, based on Boenninghausens grading of polar symptoms. After its evaluation with a variety of acute and chronic disease, which showed improvements of the results as compared to a conventional homeopathic approach, it was a challenge to test PA with multimorbid patients. Since they almost always have a very high number of symptoms, the question was whether this multitude still allows to perform polarity analysis, or if the method is manouvered out.

We treated 50 multimorbid patients with PA and prospectively followed them over one year. *Results:* Fortythree patients (86%) completed the observation reaching an average improvement of 91% of their initial symptoms. Six patients dropped out, and one did not reach an improvement of 80%, and was therefore also counted as a treatment failure. The cost of homeopathic treatment was only 41% of an analogue conventional therapy.

Conclusions: Polarity analysis functions well in multimorbidity. The multitude of symptoms does not prevent the method from reaching conclusive results. And homeopathy is well able to take over a considerable part of the treatment of multimorbid patients, this at clearly lower costs than conventional medicine.

Key words: Homeopathy, Multimorbid Patients, Polarity Analysis, Outcome. Treatment cost.

Introduction

Polarity analysis (PA) is a precisely defined and well researched method of homeopathic treatment, enabling illness to be healed with great reliability.¹ In the Swiss double-blind study on Attention Deficit Hyperactivity Disorder (ADHD), PA enabled the hit rate to be raised to the level of proof required to successfully demonstrate a significant difference between placebo and high-potency homeopathic remedies.² Evaluated also in prospective outcome analyses with acute and chronic illness PA has been found to invariably improve the results in comparison with conventional homeopathic treatment.^{1,3}

The present work aimed at a prospective evaluation of polarity analysis in the normal treatment of with at least three different complaints or diagnoses. Multimorbid patients usually present with very many symptoms, including very many polar symptoms. To correctly assign a single remedy to cover such a multitude is a great challenge. Is this in fact possible or does the multiplicity of symptoms cause a levelling of the polarity difference to the point where it becomes unusable?

In this article we will first explain polarity analysis and illustrate it with a case report. In the second part the results of the prospective observation of 50 patients are presented and discussed.

Polarity Analysis

PA is based on the grading found in Boenninghausen's *Therapeutic Pocket Book (PB 2000)*⁴, and consists of the elements *contraindications* and *polarity difference*. Hahnemann established in *Organon* § 133 that the peculiar and characteristic aspects of each symptom are shown in the modalities.⁵ In combination with ORG § 153, this means that homeopathic remedy selection in particular ought to be determined mainly by the modalities.

Boenninghausen Contraindications

Boenninghausen himself strived to unambiguously match the genius of a homeopathic remedy with the patient's characteristic symptoms.⁴ What does this mean? The genius of a remedy includes those modalities, sensations and findings that have often been seen in the remedy-proving, occurred in various localizations and have also been clinically healed. These symptoms are what is actually characteristic of the remedy. In the PB 2000 genius symptoms are generally listed with a high grade. The contradiction concerns the *polar symptoms* – those that are

expressed as opposites: for example, *thirst / lack of thirst*, *< cold / > cold*, *desire for fresh air / dislike of fresh air*). Many remedies have both poles of such symptoms but in differing grades. Since the patient's symptoms (especially the modalities) should match the genius of the remedy, Boenninghausen strived to match the symptoms in as high a grade as possible (grades 3 – 5). If the remedy contained the patient's symptom at a low grade (1 or 2) but the opposite pole of the same symptom at a high grade (3 to 5), he regarded this as a contradiction to the patient's characteristic symptoms, and therefore as a contraindication for the remedy. According to his experience, such a constellation rarely led to healing. This inspired in the author of this paper the idea of systematically prioritizing polar symptoms in the process of remedy selection. The procedure, combined with the repertory software of the PB 2000⁶, led to the development of polarity analysis: the repertorization software checks all remedies for which the opposite pole to the patient's symptoms is present in grades 3 – 5 and compares this with the grade of the patient's symptoms. It does not check opposite poles in which the grade is outside the genius range (grades 1 and 2) since here there can be no contraindication (no contradiction to the genius of the remedy). If we later check cases in which the totality of symptoms has apparently led to a good remedy selection but the result was disappointing, we often find that contraindications are the reason for the lack of success.

Polarity Difference

Polarity analysis *systematically* uses Boenninghausen's insights for *all* polar symptoms: on the one hand by excluding remedies with *contraindications*, on the other hand by calculating the *polarity difference*: This is done by adding the grades of the *polar* patient symptoms for all likely remedies and then subtracting the grades of the opposite pole symptoms. *The higher the resulting polarity difference, the better the remedy matches the patient's characteristic symptoms – assuming there are no contraindications.*

At least five polar symptoms should be used for the analysis if possible. To elicit the polar symptoms, the usual homeopathic casetaking is supplemented with checklists (for acute illness) and questionnaires (for chronic illness and multimorbidity), in which the patients underline the symptoms that they have observed in themselves. The checklists and questionnaires are specifically designed to elect polar symptoms. So far eight checklists and twelve questionnaires have been developed for different problem areas, such as neurology, gynecology, ENT and airways, allergies, and so

on³. Although the theory behind PA may sound somewhat complicated, the procedure can immediately be understood when illustrated with a case report.

Practical procedure

Multimorbid patients with three or more complaints are obviously often elderly people. With conventional medicine, which prescribes separate medications for each complaint, such patients often undergo polypharmacy, in which up to ten or more individual medications are prescribed simultaneously. This results in problematic interactions and undesirable side effects. Due to the possibility of dealing with all complaints by a single remedy, the treatment of multimorbid patients is one of the core areas of expertise in homeopathy.

Casetaking takes place, as with chronic illness, in two separate consultations. In the *preparatory consultation*, the patient's history is taken and a physical examination is conducted with the aim of recording all complaints in a holistic manner. The conventional medical diagnoses must be clear before homeopathic treatment starts. After the indication for homeopathic treatment has been established, the patients receive the homeopathic questionnaires appropriate to their complaints and are told how to carefully fill these out symptom by symptom in the period before the next consultation.

Around two to four weeks later, the patient brings the completed questionnaires to the clinic for the *main consultation*, and a *case log* is produced. The following aspects of each complaint are logged:

- First occurrence (year)
- Frequency of complaints
- Localisations, sensations and modalities
- Average intensity of each complaint on a scale from 1-10 (1 = minor, 10 = severe), which the patient is asked to rate

We then *repertorise* with the help of the case log, as usual giving priority to the polar symptoms. For the definitive *determination of the remedy*, the lack of contraindications and the size of the polarity difference are crucial. The remedy is finally selected with the help of a materia medica comparison (tables 1 and 2).

Table 1: Basic Principles of Repertorisation in Multimorbid Patients

- Conduct initial repertorisation only with polar symptoms, especially modalities
- Omit contradictory symptoms
- If there are more than twenty relevant symptoms, consider using only the most recent ones for repertorisation (according to Hering's Law)⁷.

Table 2: Criteria for the Choice of Remedy in Multimorbid Patients

- Which remedy has no contraindications and the highest polarity difference?
- Are really relevant symptoms not covered by a remedy?
- Does the remedy cover all key complaints?
- Check any symptoms that are missing from Boenninghausen's *Therapeutic Pocket Book*, by comparing with materia medica, such as Hering's *Guiding Symptoms*⁸ or Clarke's *Dictionary*⁹.

The patients are then usually given a single dose of the best fitting remedy in the potency 200C. In cases where a preexisting conventional treatment cannot be stopped at once we begin with liquid Q-potencies, normally Q3 and apply them daily. Further remedies are given in monthly intervalls in increasing potency (M, XM, LM, CM). In the case of Q-potencies we make remedy changes every four weeks (Q6, Q9, Q12, etc.).

At the monthly *check-ups*, the patient is again asked to rate the intensity of each symptom and also give an overall improvement rating on a scale of 0-10 (0 = no improvement, 10 = complete cure). The spreadsheet then automatically generates a graphic of the patient's progress. If the healing process comes to a standstill the remaining symptoms of the patient are repertorised again, including possible new symptoms, to determine the follow-up remedy.

Case report: Gerard G., 33 years old

Exhaustion Due to Stress both at Work and in the Family

Mr G. is a tall, athletic man working part-time as a computer-technician and part-time as a house husband, taking care of his family with two children, a dog and a cat. Simultaneously he is taking a bachelor's degree by correspondence course at a foreign university. In addition he does a great deal of sport.

For several weeks now he has been plagued by chronic tiredness, severely aggravated by hustle and bustle, stress and unpredicted events. After two to three hours of physical work, he is completely exhausted – although he used to be able to work for nine hours without problems. After lunch he needs a short sleep to be able to continue working. Mr G. assumes that his perfectionism is responsible for the deterioration of his performance and is now asking himself what he should try to cut down on ...

He has recently begun to have additional symptoms such as headaches and dizziness and he sometimes feels befuddled. In addition he is suffering pain when working with tools after distorting his right wrist. Another recent symptom is pain in the right hip-joint which he traces to his high-powered sport and a difference in the length of his legs. And the oldest complaint he mentions is a tendency to aphthae and recurrent tonsillitis, which occur particularly after exposure to the cold in winter. To summarize the complaints, Mr G. is suffering from exhaustion, which is beginning to manifest itself in somatic symptoms, and he may well be in the early stages of burnout.

He marks his symptoms in the following Questionnaires for Mind, Neurology, Musculoskeletal System, ENT and Eyes and Additional Complaints. They are summarized in the case log.

Case log G. G.

G. G. 33 years old							
Diagnosis, Start of symptoms	Frequency of complaints	Date of consultation DD/MM/YYYY (right) Characteristic symptoms (below)	12.06.2009	02.07.2009	10.08.2009	14.09.2009	14.10.2009
		Mean Symptom intensity	6.8	2.0	1.0	0.5	1.0
		Global Improvement	0.0	7.0	8.5	8.8	9.0
Exhaustion 2 months	Always	Sleepiness in daytime Befuddled Tiredness Feeling of drunkenness Seriousness (<i>always</i>) ^I Sleeps soundly, deeply Irritability - P ^{II} Sadness - P ^{II} < Anger > Movement - P (<i>always</i>) ^I > In open air - P (<i>always</i>) ^I	8	4	2	2	4

Headaches 12 months	Daily	Dull pain Dizziness < Worries / anger < after midday meal (= < <i>after eating</i>) - P < Cold (in general) - P ^{IV} < Getting cold - P < Physical effort - P < Looking intensely - P < Shaking head - P > Closing eyes (= < <i>light</i>) - P > Wrapping up head - P > Rubbing (massaging) - P	9	0	0	0	0
Joint pains 6 weeks	Daily	Wrist/hip joint right Muscles tense/constricted Cracking in joints < Movement - P < Sitting - P < Cold weather - P ^{III} > Warmth - P ^{IV} > Rubbing - P Aversion to open air - P	4	4	2	0	0
ENT infections 1999	Ca. 6 x per year	Sore throat Aphthae Mucocoeles < Swallowing - P < Winter ^{III} < Cold weather - P ^{III} < Cold - P ^{IV} < Inhaling cold air ^{III} < Movement - P < Physical effort - P < Talking - P	6	0	0	0	0

Comments on the case log:

P = Polar symptoms, < = worse, > = better

Italics: clarifications added by the patient during the repertorisation

I: These characteristics are always present, not only during illness. Therefore, these are characteristics of the patient, not symptoms, so they are not included in the repertorisation.

II: Polar mental symptoms are only included in the materia medica comparison.

III: The symptoms < *cold weather*, < *winter*, < *inhaling cold air* correspond to the symptom < *cold in general*. Only the latter symptom is included in the repertorisation.

IV: In Boenninghausen's *Therapeutic Pocket Book*, < *cold* and > *warmth* have the same remedies. Only one of these is used in the repertorisation, otherwise the polarity difference would be artificially increased. The same is true for the symptoms < *in open air* and > *in room*.

Only the polar physical symptoms are used for the repertorisation. Polar mental symptoms are initially excluded. This patient notes down his aggravation from cold in

many variations. We use only < cold, < getting cold and > wrapping up head. The differentiation between symptoms and characteristics of the patient is especially important in complex cases, since otherwise the correct remedy can be missed (table 3).

Table 3 First Repertorisation G.G., (PB 2000)⁶

	Bry.	Chin.	Cic.	Hep.	Merc.	Nux-v.	Phos.	Rhus.	Staph.	Am-c
Number of hits	14	14	14	14	14	14	14	14	14	13
Sum of grades	37	33	23	37	27	42	36	40	23	20
Polarity difference	25	23	19	33	11	31	23	28	9	15
< eating, after (p) [121]	4	3	1	2	1	5*	4	4*	1	2
< cold in general (p) [90]	2	2	3	4	1	4	2	4	2	3
< cold, when getting cold (p) [78]	3	2	2	3	2	4	3	4	1	2
< physical effort (p) [70]	4	3*	1	2	2	3	2	4	1	1
< looking, at something close-up (p) [85]	1	1	3	1	1	1	3	1	2	1
< shaking head (p) [71]	3	1	1	3	2	4	2	1	2	1
< light in general (p) [80]	2	3	1	3	3	3	4	1	1	1
> warmly, from wrapping up (p) [56]	1	2	3	4	2	3	1	4	2	
> rubbing (p) [74]	2	2	2	1	3	1	4	2	2	1
< movement, during (p) [126]	4	3*	2	3	3	4	3	1	3	2
< sitting (p) [126]	1	2	1	1	1	1	1	4	1	2
air, aversion to open air (p) [86]	3	3	1	3	2	4	1	3	2	2
< swallowing (p) [93]	4	2	1	4	3	3	3	3	1	1
< talking, speaking (p) [77]	3	4	1	3	1	2	3	4	2	1
> eating, after (p) [52]	1	2			1	1	3	2		2
> cold in general (p) [73]	1	1		1	1	1	1	1	1	
> cold, when getting cold (p) [74]	3	1			3/CI	1	1	1	1	
> physical effort (p) [6]										
> looking, at something close-up (p) [5]										
> shaking head (p) [3]		1								
> light in general (p) [13]									2	
< warmly, from wrapping up (p) [37]	1	2			1	1	2	1	2	
< rubbing (p) [44]					2		1		2	
> movement, during (p) [102]	1	1	1	1	3		1	4/CI	1	1
> sitting (p) [101]	4/CI	1	2	1	3/CI	4/CI	2	1	2	1
air, desire for open air (p) [76]	1		1	1			1	1	1	1
> swallowing (p) [47]		1			2	3	1	1	2	
> talking, speaking (p) [1]										

Key for repertorisation:

Contraindication CI: The opposite pole is found at grade 3, 4 or 5, whereas the patient's symptom is found at grade 1 or 2. The opposite pole is therefore typical of the remedy (i.e. corresponds to the remedy's genius), not the patient's symptom. *Remedies with contraindications are indicated by grey shading.* For example, Bryonia: the patient symptom < sitting found at grade 1 whereas the opposite

pole > *sitting* is found at grade 4. The opposite of the patient's symptom corresponds to the genius of the remedy. This remedy is therefore contraindicated because it cannot heal the patient.

No contraindication: The opposite pole is found at a lower grade than the patient symptom, i.e. the patient's symptom is typical of the remedy whereas the opposite pole is less characteristic.

Polarity difference: To calculate the polarity difference, we add the grades of each *polar* patient symptom for each remedy and subtract from the result the grades of the opposite poles. For example, Borax: $37 - 12 = 25$. *The higher the polarity difference, the more the genius of a remedy corresponds to the patient's characteristic symptoms.*

The result is nine remedies that cover all relevant symptoms; five of them have no contraindications: China (PD 23), Cicuta (PD 19), Hepar sulfur (PD 33), Phosphor (PD 23) and Staphisagria (PD 9). Nux vomica has the greatest polarity difference but one contraindication of a symptom that the patient confirms (< *Sitting*). Hepar sulfuris is therefore the first choice, China the second.

Remedy and Progress

Due to the large polarity difference and the conclusive materia medica comparison, Mr G. is given a dose of *Hepar sulfuris 200 C*.

In the first days after taking the remedy, he is very tired and the sore throat recurs. Then all complaints slowly and continuously improve. After one month, he reports an overall improvement of 70%. With further doses of *Hepar sulfuris (M, XM and LM)* the improvement increases to over 90% before stagnating. In fact, there is now an opposing trend: after Mr G. had to be treated with antibiotics for borreliosis, his tiredness increases again. Yet there are no new symptoms.

In the case log he highlights the remaining symptoms:

- Irritability - P*
- Sleepiness, tiredness: worse
- Weather, cold: worse - P
- Sitting: worse - P
- Warmth (in general): better - P
- Aversion to movement - P
- Physical effort: worse - P
- Mental effort: worse - P

* P = polar symptoms

With such a small number of symptoms, it is best to use all of them for the repertorisation.

Table 4: Second Repertorisation, G.G., (PB 2000)⁶

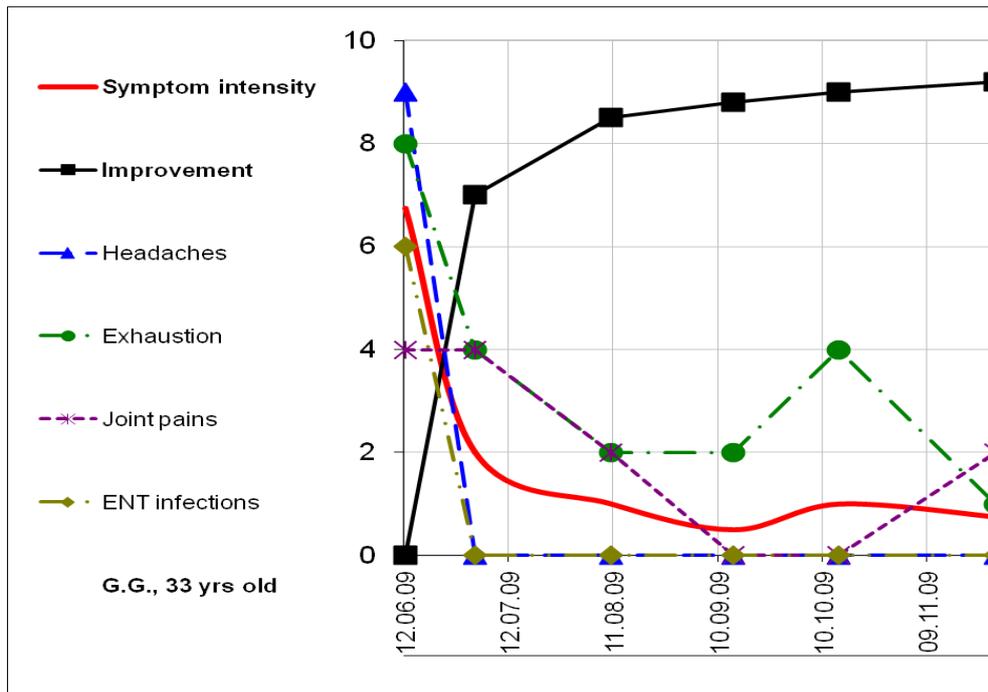
	Ars.	Borx.	Chin.	Cocc.	Ign.	Lach.	Nat-m.	Nux-v.	Phos.	Sep.	Acon.
Number of hits	8	8	8	8	8	8	8	8	8	8	7
Sum of grades	25	14	15	18	22	19	20	26	16	21	20
Polarity difference	19	7	7	9	9	15	10	18	10	12	13
< weather / air, cold (p) [88]	4	1	1	3	3	3*	2	4	3	3	3
< sitting (p) [126]	2	2	2	1	1	3	1	1	1	4	1
> warmth, in general (p) [90]	4	3	2	3	3	2	1	4	2	2	3
movement, aversion to (p) [68]	4	1	1	3	3	2	3	4	2	2	4
< physical effort (p) [70]	4	1	3*	3	1	1	3	3	2	2	3
< mental effort (p) [65]	2	2	2	3	4	5*	4*	5*	1	4	
irritability (anger, aggression) (p) [64]	2	1	2*	1	4	2	3	4	3	3	4
< tiredness, drowsiness [65]	3	3	2	1	3	1	3	1	2	1	2
> weather / air, cold (p) [44]				2	1	2	1	1	1	2	
> sitting (p) [101]	1	2	1	1	1		2	4/CI	2		2
< warmth, in general (p) [73]		1	1	1	1	1	2	1	1	1	1
movement, desire for (p) [58]	2	1	4/CI		1			1		1	2
> physical effort (p) [6]					3/CI		1			4/CI	
> mental effort (p) [3]											
mildness (p) [37]				4/CI	3		1				

Ten remedies cover everything, five of which have no contraindications. Arsenicum album stands out with a polarity difference of 19. Second is Lachesis (PD 15), third equal are Natrium muriaticum and Phosphorus (both with PD 10).

Remedy and Progress

Due to the large polarity difference and the favourable materia medica comparison, Mr. G. is given *Arsenicum album* 200 C.

One month later all symptoms have disappeared. He rates his improvement at 100%. To be on the safe side, Arsenicum album is administered for three further months in the potencies M, XM and LM. There has been no relapse since this time. Figure 1 shows the progress of this patients graphically. Period of observation: 3 years.

Figure 1: Progress Check Graphic, G. G.

Evaluation of polarity analysis for multimorbid patients: a prospective outcome observation over 12 months

Procedure

Multimorbidity is defined as presence of *at least three diagnosis* at the same time. To evaluate the effectiveness of PA in such cases we treated 50 patients according to the procedure described above and followed them prospectively over one year. Follow-up controls were performed in monthly intervals. Patients had to rate the intensity of each symptom on a scale from 0 (absent) to 10 (maximal intensity) before treatment start and at each follow-up. In addition they had to give a rating of their healing progress on a scale from 0 to 10 (10=complete healing). These values were protocolled in the case log, and printed out as a graphic progress check (figure 1). *Successful treatment* was defined as an overall improvement in all symptoms after 12 months of 80% or more.

Aims of Observation

The present work seeks to answer the following questions:

- What diagnoses occur frequently in multimorbid patients?

- How high is the proportion of patients successfully treated (improvement \geq 80% after 12 months)?
- What are the improvement rates per month?
- Which treatments are unsuccessful and why?
- What is the spectrum of remedies used?
- What is the average number of different remedies a patient needs over one year?
- How much time is required by the doctor?
- What is the cost comparison between conventional medicine and homeopathy?

Eligibility and Exclusion Criteria

The patients accepted to participate had to meet the following *eligibility criteria*:

- Minimum age 20, no upper age limit
- Three or more diagnoses or symptom complexes
- Potentially curable symptoms
- Willingness to gradually reduce or phase out their conventional medical treatment (exception: treatments for arterial hypertension)
- Acceptance of monthly checkups over the course of one year

Patients were not accepted for participation if they met any of these *exclusion criteria*:

- Life-threatening illnesses, coronary heart disease, malignant tumours
- Illness requiring substitution treatment (diabetes mellitus, hypothyroidism)
- Anticoagulant therapy
- Irreversible organ damage

Determination of time required, estimate of costs

The time required for a homeopathic treatment can be determined directly from the patient history, since this is the basis for calculating the treatment cost. The time required for a conventional medical treatment was estimated to be one hour for the initial consultation followed by 8 checkups of 20 minutes each. The costs for the homeopathic and the conventional doctors time could be calculated using *Tarmed*, the Swiss tariff of medical treatment¹⁰. The medication costs for a homeopathic treatment of 12 months duration consist of three doses each of the potency 200C and M, and two doses each of the potencies XM, LM and CM. The prices are given in the *Schweizerische Spezialitätenliste*.¹¹ For the calculation of the potential costs of

conventional medical treatment, the set of symptoms shown by each patient were assigned a medical diagnosis, and then the current therapy recommendations from the standard work *Current Medical Diagnosis and Treatment*¹² were looked up for each diagnosis. On this basis the required conventional medication was chosen from the *Arzneimittelkompendium der Schweiz*¹³ (“Medicine Compendium of Switzerland”). The costs of each medication required for long-term treatment can then be calculated based on the average daily dose. For periodic complaints such as recurrent sinusitis maxillaris, the total annual costs were calculated according to the frequency of illness and the duration of the individual episodes of illness, which was then converted to average costs per day and per year (example in table 5). Laboratory tests and imaging techniques, which constitute significant additional costs in conventional medicine, were not included in the calculation. Physiotherapy, which is necessary to the same extent in both groups, was also excluded.

Table 5: Examples of Cost Estimates for Conventional Treatment			
<i>Diagnosis</i>	<i>Treatment</i>	<i>Dose</i>	<i>Cost/Day in Euro</i>
Paraplegia	(Physiotherapy)		
Depression	Deanxit	2 x 1 Tabl/Day	0.61
Colon irritabile	Duspatalin	2 x 1 Tabl/Day	1.36
Raynaud Syndr.	Adalat retard	2 x 1 Tabl/Day	0.83
Total			2.80*
*) The calculation is based on the prices given in the <i>Arzneimittelkompendium der Schweiz</i> (Medicine Compendium of Switzerland 2010) ¹³ with an exanche rate of 1.0 Euro = 1.20 CHF.			

Results

Biometric Data of Participants are shown in table 6.

Table 6: Biometric Data of Participants		
Female	39	78%
Male	11	22%
Average Age	47.4 years	Range 24-73
Avarage Number of Diagnosis per Patient	5.7	Range 3-12

Diagnoses

Table 7 shows the most frequent diagnoses in our patients. This constitutes a representative selection of illnesses that are frequently encountered in general medical practice. In line with the exclusion criteria, the following illnesses are not found: hypertension and coronary heart disease, illnesses requiring substitution therapy such as diabetes mellitus or hypothyroidism, as well as malignant tumours.

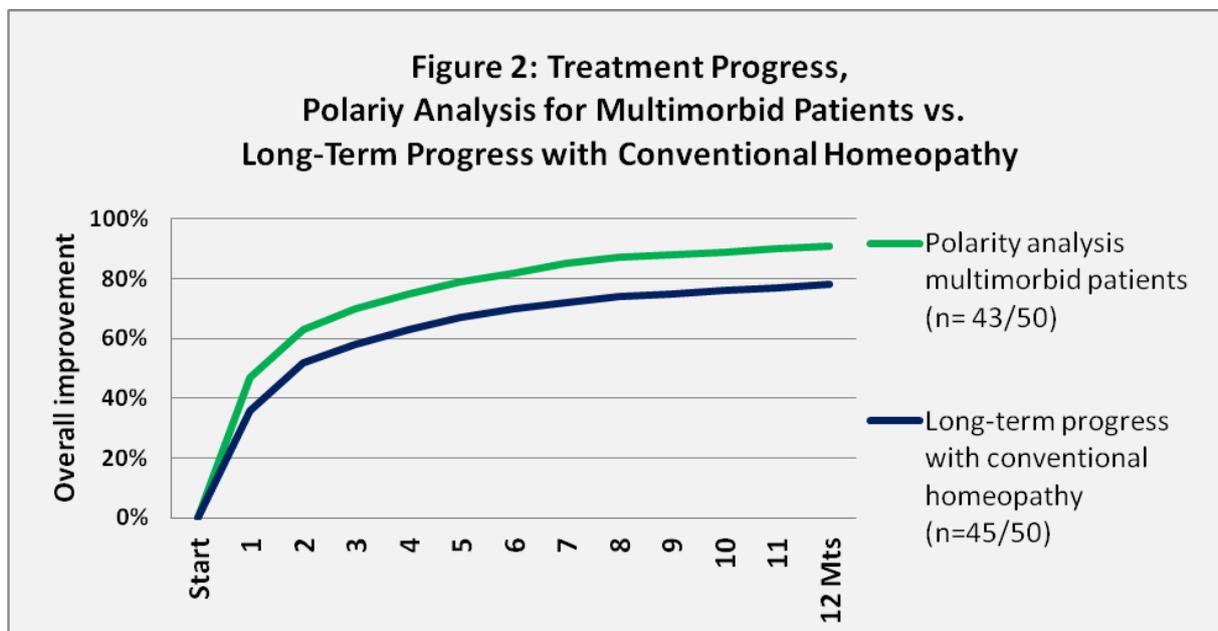
Table 7: Most Frequent Diagnoses
Asthma, hay fever, eczema
Soft-tissue rheumatism, chronic arthritis, fibromyalgia
Dysmenorrhea, menopausal complaints
Recurrent respiratory infections
Cardiac dysrhythmia
Heartburn, irritable bowel
Headache, migraine
Depression, anxiety, exhaustion
Sleep disorders
Recurrent urinary tract infections

Proportion of patients successfully treated with homeopathy

43 of 50 patients (86%) achieved an average improvement of 91% after 12 months. Six patients did not complete the observation, and one patient with chronic sleep and anxiety disorders as well as polyarthritis only achieved an improvement of 55% after twelve months (see below). She was also counted as a treatment failure.

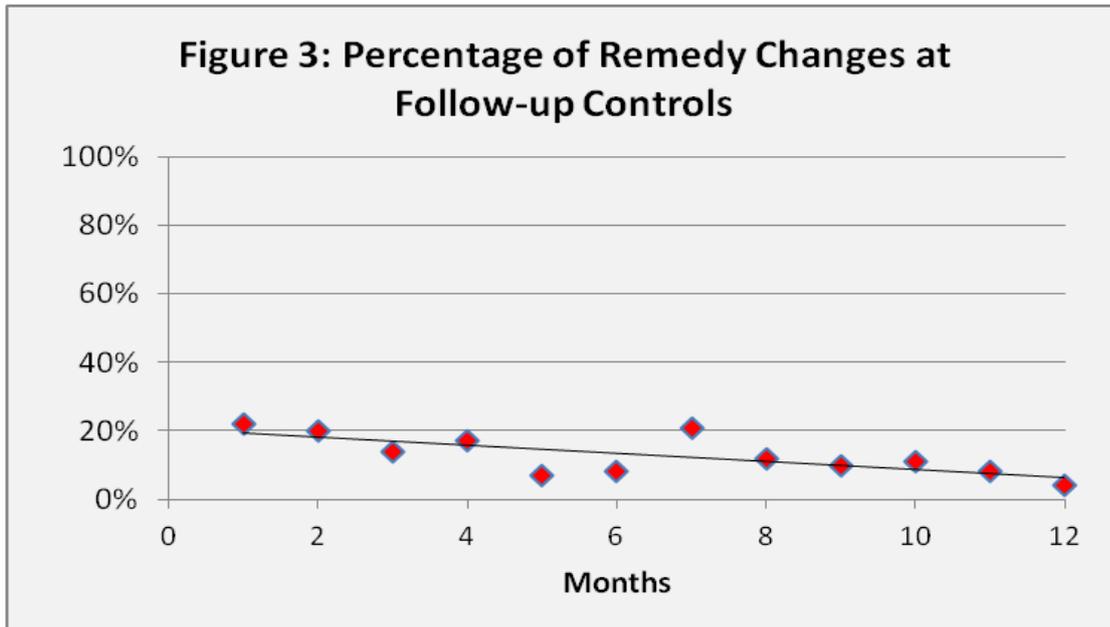
Treatment progress: rate of improvement per month (Figure 2)

Homeopathic treatment is characterised by initial substantial improvements (47% improvement after one month, 63% after two months), followed by successively smaller increments of improvement, asymptotically approaching 100% (green line in figure 2). A comparison can be made with the results of an earlier long-term observation with young patients (average age at the start of the study 11.8 years) suffering from uncomplicated chronic illness, who were treated with the Boenninghausen method, but without polarity analysis and questionnaires (blue line in figure 2).¹⁴



Average number of remedies used per patient, percentage of remedy changes

The patients received on average 2.4 different remedies within one year of treatment. The average number of remedy-changes was 13% per follow-up consultation. Remedy changes became rarer towards the end of the observation period (figure 3).



Remedy List

The remedies used and the frequency of their use are shown in table 8. It is striking that minor remedies are used reasonably often.

Nux vom.	14	Pulsatilla	3	Bryonia	1
Silicea	8	Aconite	2	Conium	1
Lyopodium	7	Arnica	2	Crocus	1
Natrium mur.	7	Aurum	2	Helleborus	1
Hepar sulfur	6	Belladonna	2	Kalium carb.	1
Rhus tox.	6	Camphora	2	Magnesium mur.	1
Sepia	6	Causticum	2	Mercurius sol.	1
Arsenicum alb.	5	Ignatia	2	Rhododendron	1
Graphites	5	Laurocerasus	2	Ruta	1
Sulphur	5	Nitricum ac.	2	Sabina	1
Alumina	3	Ammonium mur.	1	Senega	1
Calcium carb.	3	Asarum	1	Staphisagria	1
Phosphor	3	Barium carb.	1	Veratrum alb.	1

Unsuccessful treatment

Five patients stopped treatment due to inadequate response or lack of progress. A sixth patient with an improvement of 75% stopped treatment on his own initiative because he could not manage the monthly checkups. The diagnoses of the patients who dropped out and the reasons for doing so are shown in table 9.

Table 9: Dropout Patients		
	<i>Diagnoses</i>	<i>Reasons for dropping out</i>
1	Depression, dysmenorrhea, migraine	Inadequate response
2	Depression, vertigo, polyarthritis	Lack of preparation for casetaking
3	M. Bechterew, migraine, dymenorrhoea	Inadequate response, pregnancy
4	Polyposis nasi, asthma, headache	Inadequate response
5	Rheum. arthritis, depression dysmenorrhea	Poor observation of symptoms
6	Lumbalgia, chronic rhinitis, migraine	Poor compliance

One additional patient did not reach an improvement of 80%, and was therefore also counted as a treatment failure. The patients who dropped out do not obviously differ from those who were successfully treated, except for the patient who returned for the second consultation without having filled out the questionnaires.

Doctor time and medication costs

The average time required for the first homeopathic consultation was 20 minutes, whereas the more comprehensive second consultation took about 67 minutes. In 12 months of treatment, the average doctor time for homeopathic treatment was 260 minutes (range 230 - 285 minutes). This represents only a small deviation from the estimated time required for conventional medical treatment (220 minutes).

The medication costs for treatment with single doses administered on a monthly basis in increasing potencies (200 C, M, XM, LM, CM in two and a half passes) amounted to € 105 per year. The estimated costs for conventional medical treatment of the same complaints over the same period amount to € 1121 (table 10).

Table 10: Comparison of Costs - Homeopathy vs. Conventional Medicine	
<i>Homeopathy</i>	
Average physician time per year: approximately 260 minutes	533 Euro
Medication per year (1 dose per months)	105 Euro
Total	638 Euro (41%)
<i>Conventional medicine*</i>	
Average physician time per year: approximately 220 minutes	451 Euro
Medication per year	1121 Euro
Total	1572 Euro (100%)
* Costs of Laboratory tests, imaging procedures and physiotherapy not included.	

5.3 Discussion

The validation of polarity analysis for the treatment of multimorbid patients was the final test for this new method of homeopathic treatment. The results show that it can also improve the outcome in complex cases. PA enables the homeopath to precisely and reproducibly select the best remedy. With the graphical record of the symptom intensity, we can in addition document the treatment course and recognize immediately when a change of remedy is necessary. The only disadvantage is that the time required for PA in complex cases is almost as great as that for a standard homeopathic approach

The extrapolation of the costs of homeopathic treatment shows that they amount to only 41% of conventional medical treatment. This value matches the results of the Swiss study for the evaluation of complementary medicine (*Schweizerisches Programm zur Evaluation der Komplementärmedizin, PEK-Studie*). The planned publication of them was in 2005 suppressed for political reasons by the minister of health ...

One may ask if the limitation of the spectrum to the 133 remedies of the PB 2000 is a disadvantage. In fact we found in a comparative study between Boenninghausen's *Therapeutic Pocket Book* of 1897 (361 remedies)¹⁵ and the Kentian repertory (683 remedies),¹⁶ that the hit rate of the of the larger repertory was clearly lower than that of the smaller one.¹⁷ This can be explained on mathematical grounds: The probability of a correct prescription is indirectly proportional to the number of remedies. With

other words: the likelihood of success drops with the increasing number of remedies covered by a repertory. This insight conflicts with the efforts to continually expand the range of remedies used in homeopathy. It would rather make sense to more thoroughly assess the remedies that are already known, a task which is currently being undertaken by the MMRH research group.¹⁸

Conclusions

The evaluation of the results of PA tends to confirm Samuel Hahnemann's statement that homeopathy works "[...] as it were, according to mathematical certainty."^{19,20} An important side effect of the method is the streamlining of the process of choosing the remedy, which enables it to be used even in a very busy practice. Taken together, the present work indicates that homeopathy could be used to provide *comprehensive* basic medical care in an efficient and cost-effective way.

Ethics

This work is a follow up of normal homeopathic treatment, not requiring any additional examinations or diagnostic tests. As a part of the quality management of the practice it is not subject to a grant by an ethic commission. Nevertheless all patients were informed and consented to the collection of their treatment data, and they were allowed to stop treatment at any point of the observation period. The patient who's data are used for the case report agreed to their publication.

Conflict of interest statement

There were no conflicts of interest and no sponsoring by any institution.

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If you are interested in *Courses in Polarity Analysis* in the USA please contact Mrs.
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