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Study on the Clinical Effectiveness of Electronically Stored Nosodes from Tooth Diseases and Articular Rheumatism on Persons with Rheumatic diseases

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Schlüsselwörter
MORA-Bioresonanztherapie · Rheumatische Erkrankungen · Nosoden

Zusammenfassung
Hintergrund und Fragestellung: Seit zirka 15 Jahren macht einer der Autoren (JS) gute Erfahrungen bei der Behandlung von Rheumapatienten mit der exogenen MORA-Bioresonanztherapie mit individuell getesteten, elektronisch abgespeicherten Zahn- und Gelenksnosoden. Da bisher in keiner Humanuntersuchung ausschließlich solche Nosoden geprüft wurden, wurde deren klinische Wirksamkeit in einer zum Teil kontrollierten Untersuchung überprüft. **Probanden und Methode:** Es wurde eine zum Teil placebokontrollierte Untersuchung mit, je nach Kenngröße 15–21 Versuchspersonen, die an Erkrankungen des rheumatischen Formenkreises litten, durchgeführt. Primäre Zielkenngröße war der EAP(Elektroakupunktur)-40-Wert (kontrolliert), d.h. die mittlere betragsmäßige Abweichung der 40 terminalen EAP-Messpunkte von dem Normwert 50 SkT (Skalenteile). Sekundäre Kenngrößen (unkontrolliert) waren die subjektive Befindlichkeit, biochemische, physikochemische und zelluläre Kenngrößen des Blutes. **Ergebnisse:** Eine signifikante ($p < 0,01$) Verbesserung in Richtung Normwert durch die Verumbehandlung zeigte sich beim mittleren EAP-40-Wert. Die Placebobehandlung ergab zwar auch eine leichte Verbesserung des EAP-40-Wertes, diese war allerdings nicht signifikant ($p > 0,05$). Die mittlere subjektive Befindlichkeit, das mittlere Blutredoxpotenzial, die mittlere Blutsenkungsgeschwindigkeit und der mittlere Serumkalziumwert verbesserten sich signifikant ($p < 0,01$). Die mittleren zellulären Kenngrößen des Blutes, der mittlere Serumcholesterinwert und der mittlere Blutmagnesiumwert blieben unverändert oder verbesserten sich nur leicht, allerdings nicht signifikant ($p > 0,05$). **Schlussfolgerung:** Die Untersuchung gibt erste Hinweise darauf, dass individuell getestete elektronisch abgespeicherte Zahn- und Gelenksnosoden bei Erkrankungen des rheumatischen Formenkreises klinisch wirksam sind.

Key Words
MORA bioresonance therapy · Rheumatic diseases · Nosodes

Summary
Study on the Clinical Effectiveness of Electronically Stored Nosodes from Tooth Diseases and Articular Rheumatism on Persons with Rheumatic Diseases
Background and Objective: For about 15 years, one of the authors (JS) has successfully treated patients suffering from rheumatic diseases with individually tested and electronically stored nosodes from tooth diseases and articular rheumatism using exogenic MORA bioresonance therapy. Until today no human study has tested that kind of nosode therapy. The present, partially controlled study aims to test the effectiveness of that type of nosode therapy. **Participants and Methods:** A partially placebo-controlled study was carried out on 15–21 participants (depending on the parameter) who suffered from rheumatic diseases. The main outcome parameter was the mean EAP(electro acupuncture)-40 value (controlled), i.e. the mean difference of the 40 final measured values from the norm of scale division 50. Secondary outcome parameters (not controlled) were the perceived state of health as well as biochemical, physicochemical and cellular parameters of the blood. **Results:** The mean EAP-40 value was significantly reduced ($p < 0.01$) by the verum treatment. The placebo treatment also yielded slight results but these were not significant ($p > 0.05$). The mean perceived state of health, the sedimentation of blood cells, the mean calcium value and the redox potential of the blood improved significantly ($p < 0.01$). The other parameters indicated no or only slight changes ($p > 0.05$). **Conclusion:** The results suggest that therapy with electronically stored nosodes is effective in patients with rheumatic diseases.

Introduction

The MORA Bioresonance procedure was developed in the 1970s by Franz Morell, a doctor with interests in natural medicine, and the electrical engineer Erich Rasche from medication testing with electroacupuncture (EAP) as per Voll [1–3]. In exogenous bioresonance therapy biologically active substance information (postulated weak, hitherto physically unmeasurable electromagnetic oscillations of substances) is transferred from blood, urine, body fluids, for example, but also from homeopathic medications and nosodes, to people from the exterior via conductive contact with phase-constant electronic amplification or inversion via flat brass electrodes (Fig. 1). This substance information has been available since 1990 in electronically stored digital form, the so called 'electronic homeopathy' (ELH) [4].

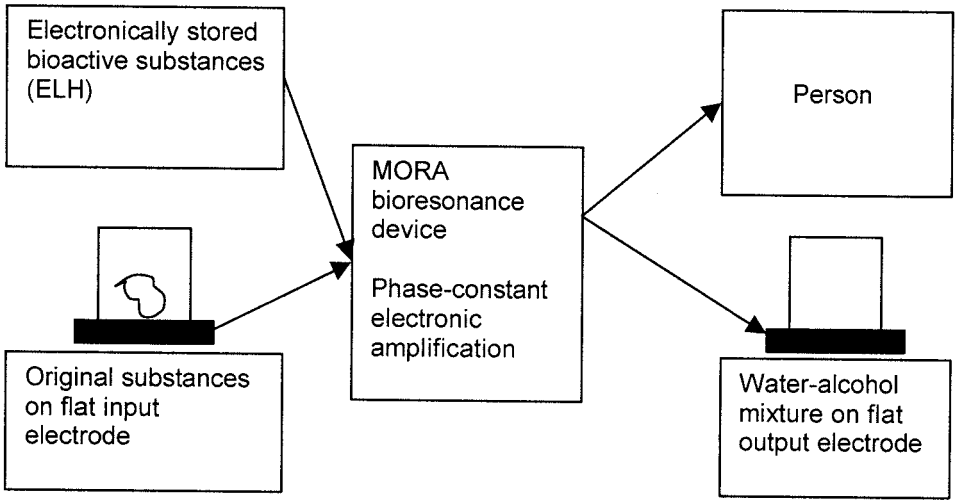

Fig. 1 Basic principles of exogenous bioresonance therapy with phase-constant electronic amplification: the postulated information is transferred from the electronic storage unit or from the original substance on flat brass electrodes via conducting cable in the MORA bioresonance device and transmitted by means of phase-constant amplification via conducting cable and flat brass electrodes directly via the hands and feet of the person or to a water-alcohol mixture.

In the last 15 years a series of animal and plant studies have been carried out, in government institutes and university institutes among others, with original substances and electronically stored substances using the exogenous bioresonance method exclusively. They document their specific biological efficacy [5–14]. Many practitioners have reported clinical successes with the electronically stored biosubstances. Admittedly there have not been any human clinical trials to date in which clinical success has been tested using electronically stored substance information alone.

As one of the authors (JS) has had practical success over about 15 years with electronically stored nosodes in various rheumatic diseases, the clinical effects of electronically stored dental and joint nosodes was tested in this investigation. Test variables are the electrical skin resistance at the 40 terminal acupuncture points using the EAP method, whereby the electronic

nosodes were individually tested, the perceived state of health of the participants and chemical and cellular parameters of the blood.

Test participants and methods

For the primary outcome parameter a placebo controlled (simple blind) investigation with 21 participants and for the secondary outcome parameters an uncontrolled investigation with 15–21 participants each were carried out. The initial 30 participants were accepted in the order of their consent to the investigation.

Test participants

The test participants involved were informed in writing and orally about nosodes and placebo therapy before the investigation and signed their agreement to participate. All test participants were aware before the investigation that they could possibly receive a placebo treatment. An additional consent from an ethics committee was not obtained as there have never been reports of side effects or complications with this non-invasive therapy.

The test participants received a simple questionnaire to document their illnesses and their perceived state of health. An extensive clinical anamnesis was not carried out. Current medication and the condition of the teeth remained unchanged throughout the investigation.

Due to non-compliance with the deadlines for the laboratory or for the EAP measurements, a number of people had to be excluded from the investigation. For some participants a few laboratory data points are missing as they did not abide by the agreement. There remained 21 test participants with regard to the primary outcome parameter: 14 women and 7 men. The oldest test participant was 82, the youngest 40 years of age (mean age: M = 57.2 years, standard deviation SD: 10.8 years). (Table 1)

All test participants had suffered for years from various rheumatic diseases (Table 1). Special examinations to prove this were not undertaken.

Outcome parameters

The primary outcome parameter for the documentation of a nosode effect is the electrical resistance of the skin (EAP measurement) at the 40 terminal acupuncture points of the nail fold angles on the hands and feet. Using these 40 results the mean nominal deviation from scale division 50 (norm value) was determined. For each participant for each of the 40 measuring points the deviations from the norm value were added and divided by 40 (arithmetic mean). This EAP-40 value specifies the mean deviation from the norm value for each participant.

The EAP measurement was carried out as per Voll [15] with brass electrodes. The EAP measuring device is integrated into the bio resonance device used (MORA® Super; Med-Tronik, Friesenheim, Germany). The results from the skin resistance measurements are given in scale divisions. The norm value amounts to 50 scale divisions. This corresponds to an electrical resistance of 100 k? with a voltage of 0.9 V and a current of 9 µA (80 units corresponds to 27 k? , 20 units corresponds to 250 k?).

Table 1 Indications, ages (years) and sex (M/F) of the participants (P)

P	Indication
F, 53	Lumbar spine syndrome for 20 yrs, cervical spine syndrome for 10 yrs
F, 62	Polyarthritis for 10 yrs
F, 74	Joint pain and bronchial asthma for yrs
M, 65	Rheumatism and sleep disturbances for yrs
F, 64	Polyarthritis and myalgia for 2 yrs
F, 58	Joint pain for yrs
M, 40	Bechterew's disease for 25 yrs
M, 48	Polyarthritis for 30 yrs
M, 47	Chronic arthritis for yrs, Hodgkin's disease for 16 yrs
F, 45	Otosclerosis, rheumatism for 20 yrs
F, 63	Polyarthritis (knee, shoulder) for 10 yrs
M, 64	Polyarthritis (knee, hip) for 3 yrs
M, 54	Polyarthritis for 5 yrs
F, 57	Arthritis, arthrosis for 5 yrs
F, 61	Polyarthritis for 8 yrs
F, 82	Polyarthritis for 5 yrs
F, 50	Polyarthritis for 3 yrs
M, 43	Polyarthritis, myalgia for 8 yrs
F, 69	Polyarthritis, myalgia for 1 yr
F, 58	Polyarthritis, headaches for 1 yr
F, 45	Polyarthritis for 5 yrs

F = female, M = male, yrs = years

The secondary parameters were recorded in order to monitor any possible connections between the physiological levels of the EAP, perceived state of health and the cellular and biochemical levels in the blood, which may be effected by the electronic nosodes. In particular the following was documented:

- ?? Perceived state of health (scale 0–100; 0 = worst, 100 = best possible state of health) (n = 21)
- ?? Blood count (leukocytes, erythrocytes, thrombocytes, haematocrit, neutrophiles, basophiles, eosinophiles, monocytes, lymphocytes) (n = 16)
- ?? Redox potential of capillary blood (n = 19)
- ?? Erythrocyte sedimentation after 1 hour (n = 16) and after 2 hours (n = 15)
- ?? Serum cholesterol (n = 15)
- ?? Serum calcium (n = 15)
- ?? Blood magnesium (n = 15)

Storage of the original nosodes and transmission to humans and to a water-alcohol mixture

The original nosodes, which are used in ampoule form and were from Staufen Pharma, Wala, and Heel, are stored separately electronically in the potencies D6 to D400.

The postulated medication oscillations, which are not physically measurable due to their low energy and power, are recorded by placing the original ampoule in conductive contact in a cup-shaped brass electrode (brass cup opening upwards). Using a downstream bandpass filter (50 Hz ± 5%) a possible 50 Hz oscillation is eliminated. The bandpass filter has a gradient of 18 dB/oct. The postulated medication signal is transmitted to an 8-bit analogue-to-digital converter via an electronic summing amplifier (amplification = 10), which overlays an artificially created random noise (amplitude = 1 V). The digitalised signal is then saved on a hard drive or a CD (software 'Electronic Homeopathy' ELH: MedTronik, Friesenheim, Germany). The frequency range used (transmission range) for the digital storing is 0–20,000 Hz. The storage unit in which the digital electronic storage is done is completely protected from external electromagnetic influences.

The recall of the stored signals is carried out in the reverse order: the electronically stored digital signal is transmitted via cable to an 8-bit digital-to-analogue converter, whose output is once again delivered to a band pass filter (50 Hz ± 5%). This analogue signal is placed at the inlet of the MORA bio resonance device and transferred to humans or to a water-alcohol mixture with variable amplification (1–100) via flat brass electrodes (Fig. 1). The power transferred with an assumed body resistance of 20,000 k? is about 5 x 10^{-5} W.

The MORA bioresonance device achieved a phase-constant electronic amplification in the frequency range of 1–200,000 Hz in this case (input resistance 100 k? , input capacitance 470 pF; output resistance 1 k? , output capacitance 470 pF; supply voltage ±6 V).

Implementation

Firstly the above named blood values (Hygieneinstitut, Universität Graz), the redox potential of the capillary blood (Oximed measuring device; MedTronik, Friesenheim, Germany) and the perceptions of the actual state of health of the participants were documented. The beginning of the investigation for the individual participants was between December 2005 and March 2006.

Immediately afterwards the first EAP system diagnostic (initial situation) was carried out. It was carried out using Voll's method with the EAP part of the MORA bioresonance device. All nailfold points on the meridian were measured, 20 points each on the left and right extremities. All measurements were carried out by JS and always using the same measuring place. The various test participants were measured at different times of the day. Each

test participant was, however, measured on the same day of the week and at the same time for each of the three EAP measuring time points.

After the EAP measurements the test participants received direct therapy with the MORA bioresonance device (phase-constant amplification with V = 7) without an electronic nosode at the inlet (placebo therapy) and a brown vial containing an alcohol-water mixture. The mixture was 1:6, i.e. 1 part alcohol p.a. and 6 parts filtered water. These were without nosode information (placebo drops). These were to be taken as 6 drops before eating 3 x daily. The participants should allow the drops to act via the mucous membrane in the mouth and drink at least 2 l of water each day.

Since the vials were placed on a flat output electrode during direct therapy, the impression was given that these drops contained the therapy information. The participants believed that they were receiving a real medication. A bogus apparent nosode testing was not carried out. A true nosode testing could not be carried out as this test already transfers therapy information.

Two weeks after the first systematic EAP diagnostic the second systematic EAP diagnostic was carried out under the same conditions. Immediately afterwards the testing of the electronically stored potency accords from D4 to D400 of the joint and dental nosodes followed (software 'Dental' and 'Nosode' of the ELH). The vegetative points of the lymph, nerve and organ degeneration vessels and the lung and colon meridians were primarily used. The test participants were always treated individually. This means that at the measuring point a value of 100 scale divisions was applied; after that all test points were integrated into the measuring circuit and the currently most effective amplification was found. It was between 28 and 91. Then the individual electronic nosode information was tested down the sequence with this amplification. Any nosode information that resonated was aggregated and transferred to the test participants via hands and feet by means of phase-constant amplification directly with the MORA bio resonance device using the previously found amplification. In addition they were simultaneously transferred via a flat output electrode to an identical alcohol-water mixture, as with the placebo drop preparation. The instructions for taking the drops were as for the placebo drops.

Four weeks after the beginning of the verum phase the above named blood values, the redox potential of the capillary blood and the perception of the actual state of health of the participants were once again documented. Immediately afterwards the third and final EAP system diagnostic was recorded. Table 2 shows the time course of the study. For ethical reasons the placebo phase was not longer than 2 weeks.

Table 2 Fundamental time course of the study (from left to right)

Beginning of the study	1st EAP	Placebo	2nd EAP	Verum	3rd EAP	End of the study
Blood examinations Redox potential Questionnaire		2 weeks	Nosode test	4 weeks		Blood examination Redox potential Questionnaire

Statistics

The statistical before and after comparison was carried out using a single factor analysis of variance with repeated observations [16]. Using the sum of squares derived from the variance analysis and the mean sum of squares, the extent of the action (W) and the behavioural stability (V) are calculated (QS: sum of squares; MQ: mean square; nosode/placebo: variation due to nosode or placebo treatment; p: number of levels; f: error variation, chance variation; between Vpn: variation between the test participants; within Vpn: variation within the test participants):

$$W ? \frac{QS_{(Nosode/Placebo)} ? (p ? 1)MQ(f)}{QS_{(withinVpn)} ? MQ(f)}$$

$$V ? \frac{MQ_{(betweenVpn)} ? MW(f)}{MQ_{(betweenVpn)} ? (p ? 1)MQ(f)}$$

The extent of action W (value range 0–1) is a mean estimate of the degree of variation of the dependent variable (e.g. EAP-40 value) within the test participants that is determined by the independent variable (verum or placebo treatment). The extent of action indicates the strength of the effect. As the variance analysis used separates the total variation into QS(within Vpn) and QS(between Vpn) only the QS(within Vpn) is used to calculate W. QS(between Vpn) indicates the variation between the individual parameter levels of the test participants and is thus individual case history, which has nothing to do with the experimental manipulations carried out here. The behavioural stability V (value range 0–1) is a mean estimate of the extent to which a behavioural pattern remains stable from one test participant to the next.

The test criterion is the 5% error probability level. If the 1% error probability level is reached, this is given.

Results

The results are shown in Table 3.

Table 3 Changes in outcome parameters due to electronic nosode therapy or placebo treatment

	n	Initial status M (s)	After placebo M (s)	After verum M (s)	D	Analysis of variance F	W	V
EAP-40 (scale divisions)	21	10.1 (4.1)	8.9 (4.3)		-1.2	2.73 n.s. ($F_{(0.05)}$ = 4.35)	0.00	n.def.
EAP-40 (scale divicions)	21		8.9 (4.3)	2.7 (0.9)	-6.2	50.68* ($F_{(0.01)}$ = 8.10)	0.69	0.16
Perceived state of health	21	45 (15)		86 (9)	+4.1	170.57* ($F_{(0.01)}$ = 8.10)	0.89	0.21
Redox potential in blood (mV)	19	248 (7)		238 (15)	-10	8.62* ($F_{(0.01)}$ = 8.29)	0.28	0.10
Blood count								
Leukocytes (10^9/l)	16	7.03 (1.49)		7.40 (1.97)	+0.37	1.37 n.s. ($F_{(0.05)}$ = 4.54)	0.00	n.def.
Erythrocytes (10^{12}/l)	16	4.75 (0.48)		4.81 (0.41)	+0.06	0.71 n.s. ($F_{(0.05)}$ = 4.54)	0.00	n.def.
Thrombocytes (10^9/l)	16	264 (67)		255 (60)	-9	2.41 n.s. ($F_{(0.05)}$ = 4.54)	0.00	n.def.
Haematocrit (%)	16	42.9 (3.8)		43.1 (3.8)	-0.2	0.13 n.s. ($F_{(0.05)}$ = 4.54)	0.00	n.def.
Neutrophiles (%)	16	59 (8)		59 (10)	0	0.00 n.s. ($F_{(0.05)}$ = 4.54)	0.00	n.def.
Basophiles (%)	16	0.9 (0.3)		0.9 (0.3)	0	1.00 n.s. ($F_{(0.05)}$ = 4.54)	0.00	n.def.
Eosinophiles (%)	16	2.8 (2.5)		2.8 (1.9)	0	0.00 n.s. ($F_{(0.05)}$ = 4.54)	0.00	n.def.
Monocytes (%)	16	7.1 (1.6)		7.6 (2.7)	+0.5	0.60 n.s. ($F_{(0.05)}$ = 4.54)	0.00	n.def.
Lymphocytes (%)	16	30 (8)		30 (7)	0	0.02 n.s. ($F_{(0.05)}$ = 4.54)	0.00	n.def.
Sedimentation – after 1 hr (mm)	16	10.9 (9.3)		7.6 (6.7)	-3.3	10.15* ($F_{(0.01)}$ = 8.68)	0.35	0.87
– after 2 hrs (mm)	15	29.0 (19.1)		20.9 (14.3)	-8.1	12.76* ($F_{(0.01)}$ = 8.86)	0.42	0.87
Serum cholesterol (mg/dl)	15	212 (45)		212 (50)	0	0.0 n.s. ($F_{(0.05)}$ = 4.60)	0.00	n.def.
Serum calcium (mg/dl)	15	9.9 (0.5)		9.2 (0.5)	-0.7	97.73* ($F_{(0.01)}$ = 8.86)	0.86	0.84
Blood magnesium (mg/dl)	15	2.02 (0.42)		1.91 (0.14)	-0.11	0.84 n.s. ($F_{(0.05)}$ = 4.60)	0.00	n.def.

n = number of participants; D = absolute difference; W = extent of action (degree of effectiveness);
V = behavioural stability. n.def. = not defined
M = mean value, s = standard deviation
* = significant changes; n.s. = not significant

The mean EAP-40 value improved due to the placebo therapy by 1.2 scale divisions (Fig. 2), however, this improvement was not statistically significant. A significant improvement of 6.2 scale divisions in the mean EAP-40 value was

achieved with the verum therapy (Fig. 2). The extent of action was relatively high with 0.69. The performance stability was however low (V = 0.16), that is, the individual participants reacted to different extents to the electronic nosode therapy. The wide scattering of the mean EAP-40 value was a result primarily of the large individual differences in level (range 3.8–18.4 scale divisions).

To this fits the mean perceived state of health significantly improving (Fig. 3) as did the verum EAP-40 value with a high extent of action of 0.89 and a low behavioural stability. The mean redox potential of the capillary blood was also significantly reduced (Fig. 4). The extent of action was in the middle range (W = 0.28).
The mean sedimentation speed after 1 and 2 hours, which was in the upper normal range before the treatment, decreased significantly with a relatively high extent of action in the 40% range (Figs 5 and 6). The participants reacted uniformly to the independent variable: V = 0.87. The sedimentation speed decelerated due to the treatment for almost all participants. The wide scatter range resulted from the large individual differences (1 hr: 3–37 mm; 2 hrs: 5–77 mm).

The mean calcium value, which was on the border of the upper range prior to the electronic nosode therapy, was lowered significantly on average to the middle range. The extent of action (0.86) and the behavioural stability (0.84) were high, that is, the dependency of the treatment was extensive and the reaction of the participants uniform (Fig. 7).

The mean magnesium value prior to the treatment was in the optimal range and did not change significantly due to the treatment.

The mean cholesterol value did not change significantly.

The mean minimal changes in the blood cell number were not significant.

In Table 4 the positive test results with the electronic nosodes are summarised according to the frequency of their appearance. The electronic nosodes 'Silver amalgam' and 'Alveoli dentales' tested positive with every test participant and were therefore used therapeutically for everyone.

Discussion

Treatment with individually tested electronically stored dental and joint nosodes influenced the mean EAP measurement (EAP-40 value) of the participants and this correlates with an improvement in the mean subjective perception of their state of health. These positive changes in the perceived state of health and on the 'energetic' or vegetative-functional level partially correlates with biochemical changes. The average lowering of the sedimentation speed shows that the inflammatory processes were on average decreased. The slight average decline in the redox potential (oxidation status of the blood) indicates a corresponding decline in the oxidative stress. The

average regulation of the calcium value shows that the electrolyte balance is also positively influenced by the treatment.

Table 4 Number of test participants with positive test results with the electronic nosodes

Electronic dental nosodes	n
Silver amalgam	all
Alveoli dentales	all
Non gamma amalgam	18
Nos. periodontitis	16
Nos. mycosis oris (Sdf)	16
Brass amalgam II	16
Nos. jaw osteitis	15
Nos. radicular cyst	15
Articulatio temp. mand.	16
Membrana sinus maxil.	16
Osteitis comp.	14
Maxilla	13
Mandible	15
Inorganic fluorine compounds	13
Nos. root treated tooth	13
Oxypanigam	12
Nos. chronic pulpitis	14
Nos. dental sac	13
Nos. gingival sulcus	13
DMPS	13
Nos. gangrenous pulp	10
Organic fluorine compounds (Sdf.)	10
Electronic joint nosodes	**n**
Nos. serous joint effusion	18
Nos. rheumatism	15
Nos. tonsillitis polyarthritis	13
SN arthritis psoriatica	12
Nos. chronic myositis	13
Nos. arthritis urica	12
Nos. polyarthritis	10
Nos. Dupuytren's contracture	10
SN Bechterew's disease	6

The physical-physiological mechanisms of action for the effect of this informative nosode therapy are not known. There currently exist only hypotheses [17]. Two Russian studies have shown, however, that lowered concentrations of cellular stress proteins and antioxidative protective enzymes normalised due to endogenous bioresonance therapy in patients with rheumatoid arthritis [18, 19].

Controlled animal and plant studies with original substances [5, 6, 10–14] and with electronically stored substances [7–9, 11] document the biological efficacy of exogenous bioresonance therapy in which the transmission of electronically stored substance information significantly influenced for example tadpole development and cardiac activity in guinea pigs. This does not actually prove their clinical efficacy in humans, but it does support the positive results of this first human study in which the efficacy of electronically stored biologically active substances alone was tested on ill humans.

The investigation that was carried out did not satisfy the highest demands of scientific evidence. All the parameters apart from the EAP-40 value were documented uncontrolled, the number of participants was relatively small, and the placebo and verum phase for the EAP-40 value were different for ethical reasons. Due to the different periods of action of the verum and placebo (4 versus 2 weeks) the extent of the placebo action could be underestimated. Furthermore a subtle form of suggestion cannot be excluded due to the simple blinded method of placebo administration because the person administering the placebo was aware of this.
There are considerable differences of opinion even within complementary medicine about the assessment of the objectivity of the EAP measurement (skin conductance measurement) and the EAP medication test. The reproducibility and validity of the skin conductance measurements and the medication tests has been shown by a number of authors [20–27]. Preischl and Heyer documented this with a robotic system [28, 29]. Because medication testing is admittedly already a specific therapy and thus is an informative influence on a self-regulating system, individual memory effects in the form of normalisations of values read after a positive testing may be possible, which can influence subsequent test results.

In practice skin conductance measurements done by an experienced practitioner under similar conditions are comparable. Between a number of practitioners in different practices average differences in level can, however, arise, because the experimental conditions (e.g. contact pressure) are not necessarily identical. In this sense the objectivity, reliability and validity of an EAP measurement are limited. In this investigation all measurements were therefore carried out by a single practitioner under identical experimental conditions.

Since the deviation from the average of the test sequence (relative difference) is decisive with EAP measurement, the validity of the basic diagnostic statement is essentially not influenced due to the limited objectivity and reliability.

The current results should be tested with further experiments. These should be carried out as randomised, placebo-controlled and double blind studies with all incorporated parameters.

Conclusion: This investigation provides the first evidence that individually tested, electronically stored dental and joint nosodes administered as part of exogenous bio resonance therapy are clinically effective in patients suffering from rheumatoid diseases.

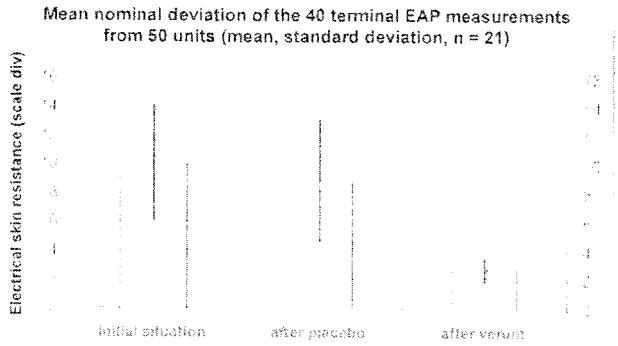

Fig. 2 EAP-40 results. The difference between placebo and verum is significant ($p < 0.01$).

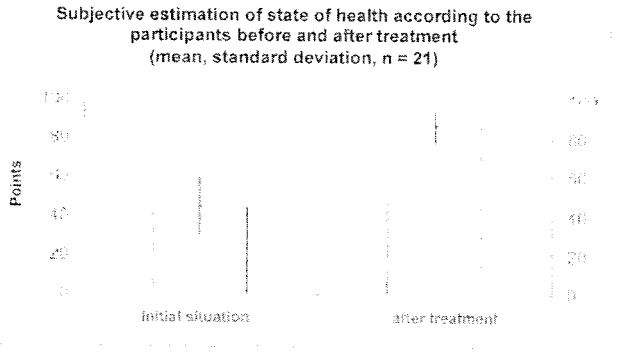

Fig. 3 Perceived state of health results. The difference is significant ($p < 0.01$).

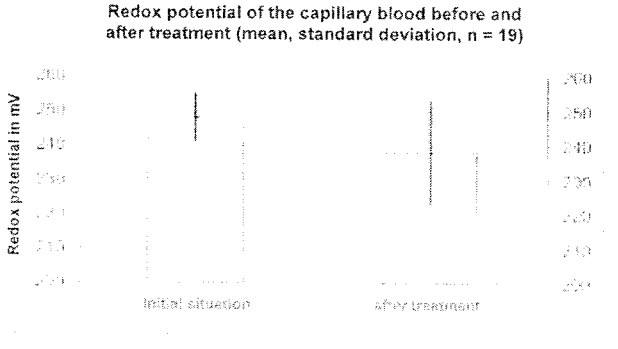

Fig. 4 Redox potential results. The difference is significant ($p < 0.01$).

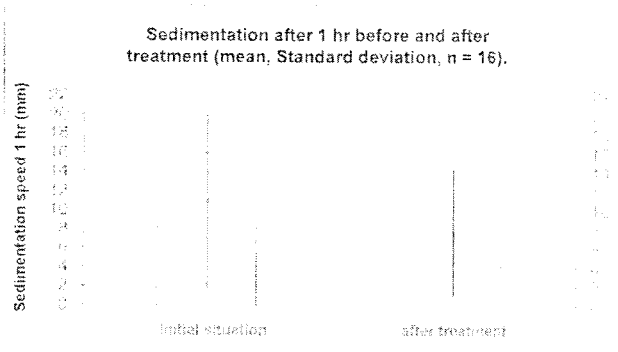

Fig. 5 Sedimentation after 1 hr results. The difference is significant ($p < 0.01$)

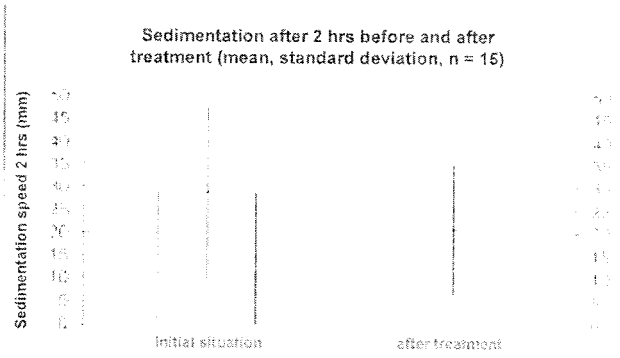

Fig. 6 Sedimentation after 2 hrs results. The difference is significant ($p < 0.01$).

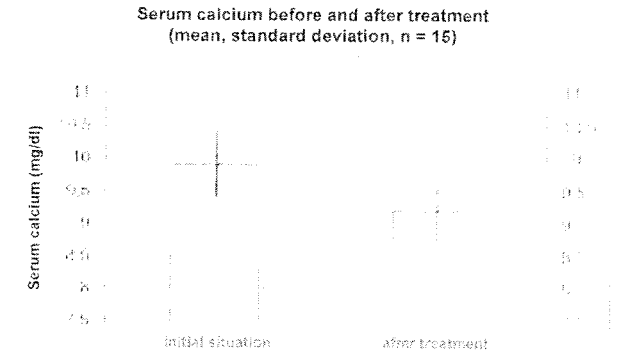

Fig. 7 Calcium results. The difference is significant ($p < 0.01$).

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