



A CASE REPORT OF TYPE 4H CHARCOT-MARIE-TOOTH DISEASE SUCCESSFULLY TREATED WITH INDIVIDUALIZED HOMOEOPATHIC MEDICINE

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Article History

Received: 15.12.2024

Accepted: 08.01.2025

Published: 03.02.2025

Abstract: - Charcot-Marie-Tooth disease (CMT), also known as hereditary motor and sensory neuropathy or HMSN, is the most prevalent inherited neuromuscular ailment and one of the most prevalent groups of genetic disorders in humans. The primary clinical manifestation of CMT is comparatively uniform, characterised by distal limb muscular weakness and wasting, skeletal abnormalities such as pes cavus, and diminished or absent tendon reflexes. Although mild-to-moderate sensory abnormalities are conceivable, majority of patients do not experience clinical sensory problems. There are no previous studies conducted in Homoeopathy on CMT. The case reported was of a 25-year-old female born of consanguineous marriage, presented with weakness and tingling sensation of both upper and lower extremities with difficulty to stand and walk, tendency to fall while walking, inability to hold the neck without support, inability to sit without support and difficulty in swallowing for 6 months. The patient had conducted genetic testing and got diagnosed as CMT, Type 4H. After repertorization, on the basis of totality of symptoms, Phosphorus 30C was given and the medicine was repeated infrequently based on homoeopathic principles and physiotherapy sessions were also advised. During the course of the treatment potency was changed to 200C. Within 6 months of treatment the patient had marked improvement in her complaints and the positive causal attribution was assessed by MONARCH. The video evidence taken after the treatment along with the assessment report from physiotherapist have provided evidence for the improvement obtained from Phosphorus in CMT.

Keywords: Charcot-Marie-Tooth disease, Hereditary motor and sensory neuropathy, Homoeopathy, Individualized homoeopathy, MONARCH, Phosphorus.

Introduction

Hereditary motor and sensory neuropathy, or Charcot-Marie-Tooth (CMT) disease, is a genetically diverse collection of inherited neuropathies. Over 40 genes that are expressed in Schwann cells and neurons can become mutated to cause CMT, which results in overlapping symptoms.¹The three physicians who initially described CMT in 1886 are honoured by the name of the condition.²

The most prevalent hereditary neuromuscular illnesses in the world are CMT and its associated disorders. The estimated population prevalence varies according on the ascertainment method and ethnic background, ranging from 1 in 1214 to 1 in 2500.³

Genetically, CMT is heterozygous. There are various kinds of CMT, including AD demyelinating (CMT1), AD axonal (CMT2), AR (CMT4), and X-linked (CMTX).⁴ The two most common kinds in Western nations with mixed ethnic populations are autosomal dominant and X-linked dominant. Autosomal recessive versions, on the other hand, are more common and may even be the most

commonly diagnosed kind of CMT in nations with homogeneous or isolated populations or where consanguineous marriages are the norm.³

Compared to autosomal dominant CMT1, the autosomal recessive demyelinating form of CMT known as CMT type 4 (CMT4) has an earlier start of symptoms. Based on clinical characteristics and hereditary factors, CMT4 is further subdivided into numerous subgroups, ranging from CMT4A to CMT4J. In particular, CMT type 4H is characterised by first-decade onset, sluggish development, areflexia, and frequent scoliosis. It is caused by mutations in the FGD4 gene.⁵ Combination of lower motor neuron-type motor deficits and sensory signs and symptoms, reflecting the sensory-motor neuropathy defines primary features of CMT. There are flexia along with length-dependent paresis and muscular atrophy, while some individuals may still have deep tendon reflexes, particularly in the axonal types. Hammertoes, high arched feet, and foot deformities such pes cavus are all consequences of the chronic nature of motor neuropathy. As the condition worsens, the hands could become involved. The loss of joint position and vibration feeling, followed by a decrease in pain and temperature

Cite this article:

Binuraj, SR, Krishnan, A.A., (2025). A CASE REPORT OF TYPE 4H CHARCOT-MARIE-TOOTH DISEASE SUCCESSFULLY TREATED WITH INDIVIDUALIZED HOMOEOPATHIC MEDICINE. *ISAR Journal of Medical and Pharmaceutical Sciences*, 3(2), 9-16.

perception in the distribution of gloves and stockings, are common symptoms of sensory system malfunction.⁶

The following procedures are followed in the diagnostic process to determine the CMT subtype: defining the clinical phenotype, determining the inheritance pattern, conducting an electrophysiological examination, performing molecular analysis, and, in certain situations, performing a nerve biopsy.⁷ Genetic test also helps assign correct diagnosis in some cases that were previously thought to have other forms of neuropathy.²

For CMT, there is currently no effective medication treatment available. The current course of treatment involves skeletal deformity surgery, rehabilitative therapy, and symptomatic pain management.⁸ Only in monogenic illnesses where the mutation clearly results in loss of function can gene therapy procedures for gene replacement be implemented. Research has demonstrated a connection between axonal degradation and clinical impairment. Thus, the endeavour to furnish trophic reinforcement via neurotrophic factors represents a propitious methodology.⁹ But most of the modern treatment procedures have shown to present with adverse side effects to the patient.^{8,10}

Currently under homoeopathy there are no previous studies available on the management of CMT with homoeopathic medicine. We share a diagnosed case of CMT successfully treated with individualised homoeopathy within a period of 6 months. The case report is prepared while adhering to the HOM-CASE guidelines¹¹, an extension of CARE guidelines and the causal attribution of the changes in this case was assessed by the Modified Naranjo Criteria (MONARCH).¹²

Patient information

A 25-year-old female born of consanguineous marriage, came to the outpatient department of NHRIMH with the complaint of weakness and tingling sensation of both upper and lower extremities with difficulty to stand and walk and tendency to fall while walking, inability to hold the neck without support and inability to sit without support, along with difficulty in swallowing for 6 months.

History of present illness

The complaint started gradually at the 5th month of gestation, started presenting as difficulty in lifting both her hands above shoulder level followed by tingling of both hands. Complaint got worsened progressively with inward bending of both knees while walking and difficulty to walk without support. Gradually she developed difficulty in wearing slippers along with tingling sensation in lower limbs. Gradually both upper limbs showed weakness with difficulty to make food bolus and to hold things and raise arm above shoulder. Later developed difficulty to turn sideways in bed as well as to lift the neck. She became bed ridden by 8th month of gestation. There was no history of diplopia, dysarthria, wasting of muscles, muscle cramps or pain in any part of body. No history of Diabetes mellitus, hypertension and dyslipidaemia.

She was treated initially in Government medical college Kozhikode, where she was diagnosed with Sensorimotor axonopathy. Later conducted a genetic testing on which she was diagnosed with Charcot Marie Tooth disease Type 4H (**Fig 1**).

She underwent a C-section delivery and baby had a birth weight of 2.4 kg. Within 2 months of delivery, she came for Homoeopathic treatment at NHRIMH and was admitted in the IPD section.

Past history

No relevant past history.

Family history

She reported that her brother had similar illness and paternal grandmother had history of coronary artery disease and died from acute Myocardial infarction.

Physical generals

She had a desire for warm foods with more preference to pungent things. Perspiration was more pronounced over the forehead. The patient also presented with hard stool for 2 months. Other generals were good.

Mental generals

She was a fastidious person who desired travelling. Had fear towards all types of animals. She was also an obstinate person.

Physical examination

Pulse- 88 bpm, Blood pressure- 100/80 mm Hg, Heart rate- 86 bpm. Presented with oedema over upper back.

Systemic examination

All the higher mental functions and cranial nerve examinations were normal. On inspection patient presented with pes cavus and mild genu valgum. The patient showed impaired vibration perception in all the tested regions of upper and lower limbs. Muscle wasting was present on both upper and lower limbs, also presented with flaccidity of upper and lower limb muscles with power of each upper limb was elicited as grade 2/5 and the power of each lower limb was elicited as grade 1/5. All the reflexes were lost.

Therapeutic Intervention

First prescription(25/10/2022)

After detailed case taking and repertorization, Phosphorus 30 was given and the medicine was repeated infrequently based on homoeopathic principles.

The patient was also given physiotherapy sessions.

Basis of prescription

The following symptoms were considered for repertorization: Fastidious, Fear of animals, Obstinate, Desires pungent foods, Desires warm foods, Perspiration over forehead, hard stool, weakness and tingling of extremities.

Repertorization was done on RADAR (Rapid Aid to Drug Aimed Research, Archibel Homoeopathic Software, Belgium) version 10 by Archibel Homoeopathic software, and Phosphorus ranked first with a score of 15/9 (**Fig 2**).

Follow up and outcomes

The patient continued the treatment for 6 months in the In-patient department of NHRIMH, Kottayam. (**Table 1**)

Table 1- Follow up and outcomes

<u>Date of follow up</u>	<u>Symptoms and justification of prescription</u>	<u>Medicine with dose</u>
26/10/2022	<ul style="list-style-type: none"> Weakness of extremities persists. Tingling sensation of upper and lower limbs persists. Difficulty in standing/ walking with tendency to fall and cannot sit without support for 10- 15 min Swelling in upper back persists. Difficulty in swallowing persists. Stool – hard 	<ol style="list-style-type: none"> Placebo for 1 day Physiotherapy
27/10/2022	<ul style="list-style-type: none"> Weakness of extremities persists. Tingling sensation of upper and lower limbs persists. Patient was able to sit with her back supported on the headboard of cot. Difficulty in swallowing reduced. Swelling in upper back – persisted Stool – hard 	<ol style="list-style-type: none"> Placebo for 1 day Physiotherapy
28/10/2022	<ul style="list-style-type: none"> Weakness of extremities persists. Tingling sensation of upper and lower limbs persists. Able to hold the neck more firmly than before. Difficulty in swallowing relieved. Swelling in upper back persisted. Stool – hard 	<ol style="list-style-type: none"> Placebo for 1 day Physiotherapy
29/10/2022	<ul style="list-style-type: none"> Weakness of extremities persists. Tingling sensation persists. Able to hold the neck more firmly than before. Swelling in upper back persisted. Stool – hard 	<ol style="list-style-type: none"> Phosphorus 30/1d(hs) Physiotherapy
31/10/2022	<ul style="list-style-type: none"> Weakness of extremities- slight relief Tingling sensation- slight relief Tried to brush by herself although couldn't do it. Swelling of upper back- reduced. Able to hold the neck for 5 minutes. Stool – hard 	<ol style="list-style-type: none"> Placebo for 1 day Physiotherapy
1/11/2022	<ul style="list-style-type: none"> Weakness of extremities- slight relief Tingling sensation- slight relief Tried to write by herself Was able to stand for 1 minute with 2 person support the day before. Pain in joints and muscles of left leg. Stool - hard 	<ol style="list-style-type: none"> Placebo for 8 days Physiotherapy
9/11/2022	<ul style="list-style-type: none"> Weakness of extremities – reduced Tingling sensation- reduced Sat in the bed with legs hanging down with hands supporting over the bed for 30 min. Swelling in upper back- reduced. Pain present on both shoulder joints. Pain in left leg – relieved. Hardness of stool reduced 	<ol style="list-style-type: none"> Phosphorus 30/ 1d(hs) Physiotherapy
13/11/2022	<ul style="list-style-type: none"> Stands without support for 10 min. Tingling sensation- reduced Able to raise the hand upto 90 degree. Pain in nape of neck radiating to lower back Stool voided normal 	<ol style="list-style-type: none"> Phosphorus 30/ 1d(hs) Physiotherapy
21/11/2022	<ul style="list-style-type: none"> Pain in nape of neck persists. Tingling sensation of upper and lower limbs- relieved. Other complaints persists as such Generals – good 	<ol style="list-style-type: none"> Phosphorus 200/1 dose Physiotherapy
23/11/2022	<ul style="list-style-type: none"> Walked more than 10 steps with walker and 1 person support Pain in nape of neck – persists Yesterday ate food by herself Generals- good 	<ol style="list-style-type: none"> Placebo for 1 week Physiotherapy

1/12/2022	<ul style="list-style-type: none"> Was able to extend both hands backward. Pain in nape of neck – reduced. Able to walk with walker and 1 person support for about 10 minutes Generals- good 	<ol style="list-style-type: none"> Phosphorus 200/1 dose Physiotherapy
7/12/2022	<ul style="list-style-type: none"> Able to eat food by herself and brush teeth by herself Able to walk using walker without 1 person support. Pain in right knee joint and right upper limb Generals – good 	<ol style="list-style-type: none"> Placebo for 1 week Physiotherapy
14/12/2022	<ul style="list-style-type: none"> Able to rise up from sitting position using walker. Able to hold both hands up for long time Pain in upper limb relieved but persists on both lower limbs Generals – good 	<ol style="list-style-type: none"> Placebo for 20 days Physiotherapy
07/1/2023	<ul style="list-style-type: none"> Able to rise up from sitting position without support Pain in upper back Able to walk with 1 person support for greater distance. Generals- good 	<ol style="list-style-type: none"> Phosphorus 200/1 dose Physiotherapy
03/02/2023	<ul style="list-style-type: none"> Was able to put the chappals by herself and go to bathroom Able to ascend the steps with 1 person support Right sided headache on and off Generals – good 	<ol style="list-style-type: none"> Placebo for 9 days Physiotherapy
14/02/2023	<ul style="list-style-type: none"> Able to walk by herself without support as well as ascend 4 steps. Can hold the feet more firmly while walking. Headache – relief Generals- good 	<ol style="list-style-type: none"> Placebo for 20 days Physiotherapy
06/03/2023	<ul style="list-style-type: none"> Able to climb up 5 steps without support. Able to walk greater distance without support Generals – good 	<ol style="list-style-type: none"> Phosphorus 200/ 1dose Physiotherapy
16/03/2023	<ul style="list-style-type: none"> Able to climb onto bed by herself Able to rise up from lying down position without support Pain in both knee joints Generals- good 	<ol style="list-style-type: none"> Placebo for 10 days Physiotherapy
27/03/2023	<ul style="list-style-type: none"> Was able to walk by holding the baby Able to do stretching and cycling exercise in physiotherapy Generals- good 	<ol style="list-style-type: none"> Placebo for 20 days Physiotherapy
19/04/2023	<ul style="list-style-type: none"> Able to hold the baby more freely and walk greater distance Able to climb steps from one floor to next. Generals- good 	<ol style="list-style-type: none"> Placebo for 4 days Physiotherapy
22/04/2023	<ul style="list-style-type: none"> Able to raise the arm above shoulder by holding the dumbbells Able to walk long distance holding the baby Generals- good 	<ol style="list-style-type: none"> Phosphorus 200/ 1 dose Physiotherapy
04/05/2023	<ul style="list-style-type: none"> Patient showing marked improvement with increase in power of the muscles Patient got discharged with review after 1 month 	<ol style="list-style-type: none"> Phosphorus 200/ 10 doses(once in 3rd night)
8/06/2023	<ul style="list-style-type: none"> Able to do all the household activities by herself Generals – good 	<ol style="list-style-type: none"> Placebo for 3 months
07/03/2024	<ul style="list-style-type: none"> No recurrence of complaints. Generally feeling well and able to do all duties by herself. Generals- good. 	<ol style="list-style-type: none"> Placebo for 1 month

Results

The patient showed gradual improvement of her symptoms after prescription of homoeopathic medicine Phosphorus which started with 30C potency, gradually was raised to 200C. Within 6 months she was able to stand and walk all by herself and the power of the muscles of upper and lower limbs raised from 2/5 and 1/5 to 5/5 and 5/5 respectively, the vibration perception that was lost in all the

limbs at the time of admission was regained at the time of discharge and all the reflexes were also present. The Physiotherapy evaluation report of the patient during the course of treatment confirmed the improvement (**Fig 3**). The patient who during her initial visit (25/10/2022) was bed ridden and brought in a stretcher, during the time of discharge (04/05/2023) was able to go home by walking, without any support. Individual curative response to homoeopathic treatment was assessed through the Modified

Naranjo Criteria for Homoeopathy (MONARCH) inventory and a score of +5 was obtained (**Table 2**), which shows the positive causal relationship between the individualized homoeopathic medicine and the outcome. The patient was reviewed for another 10 months and had no recurrence of any symptoms and was able to do all household duties by herself.

Discussion

The conventional treatment for CMT is by rehabilitation therapy, surgery for skeletal deformities and symptomatic treatment.⁸ Studies mentions gene therapy to be one of the effective ways in the treatment of CMT.¹³ But past reports suggest that the therapy too have its side effects. Studies shows 2 leukaemia cases that had occurred in one patient from gene therapy due to the activation of an oncogene called LMO2 associated with childhood leukaemia with the insertion of the retroviral vector.¹⁴ Gene therapy also have disadvantages as viral vectors show poor target cell specificity and appears to be a costly procedure as like surgeries.¹⁵

Compared to such costly procedures in conventional treatments, homoeopathy offers a cost-effective management of such chronic diseases. It emphasizes on a holistic approach in the treatment. Also, homoeopathy is a system of medicine which allows the treatment of a person without any side effects. There are no previous studies reporting the treatment of CMT with homoeopathy.

In this case, the diagnosis was made on the basis of history as well as by genetic testing. The patient came with features of LMN type paralysis along with sensory manifestations and a positive family history resembling CMT. After repertorisation, the patient was given Phosphorus 30C based on the totality of symptoms which was infrequently repeated based on homoeopathic principles. The patient was also given physiotherapy along with the medication. Gradually during the course of treatment, the potency was changed from 30C to 200C. Total duration of the treatment was of approximately 6 months (25/10/2022 to 04/05/2023) and within this period of time the patient had considerable relief of her complaints. The physiotherapist also re-examined the patient at the end and their comments states that the patient's range of motion increased, balance improved, muscle strength increased, sitting and standing balance attained, able to walk without support and able to hold her baby for about 20-25 minutes (**Fig 3**). Video recording was made on the condition of the patient before, during and after treatment and the patient who was bed ridden at the time of admission, was able to do all her duties by herself at the time of discharge and go home by walking without any support.

The action of Phosphorus on the nervous system is most marked and has been mentioned in various literatures and *Materia medica*.^{16,17} Dr. J. T. Kent in his *Lectures on Homoeopathic Materia medica* has clearly mentioned about the action of Phosphorus in case of paralysis of lower limbs and gait abnormalities.¹⁸ In the given case based on the totality of symptoms Phosphorus was prescribed and the medicine along with the advocacy of physiotherapy brought relief to the patient within 6 months.

Conclusion

This case report highlights the role of individualized homoeopathic medicine as an adjunct therapy in the management of Charcot

Marie Tooth disease. Since no previous studies were conducted in Homoeopathy on the condition, this case reports paves the path for further homoeopathic researches on CMT which might proves the efficacy of Homoeopathy as an adjunct or even as a stand-alone treatment for the same.

Declaration of patient consent:

The authors certify that the patient had given her consent for the photos and clinical information for publication in the journal concealing her identity.

Financial support and sponsorship:

Nil

Conflict of interest:

None declared.

Acknowledgement


The authors are grateful to Aiswarya Bhasi and Anjitha Krishnan of the Physiotherapy department of NHRIMH for providing the patient with the physiotherapy sessions.

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DNA TEST REPORT - MEDGENOME LABS

Full Name / Ref No:		Order ID/Sample ID:	508900/7708842
Gender:	Female	Sample Type:	Blood
Date of Birth / Age:	24 years	Date of Sample Collection:	29 th September 2022
Referring Clinician:		Date of Sample Receipt:	1 st October 2022
		Date of Order Booking:	3 rd October 2022
		Date of Report:	25 th October 2022
Test Requested:	Clinical Exome		

CLINICAL DIAGNOSIS / SYMPTOMS / HISTORY

Mrs. [REDACTED], born of consanguineous marriage, presented with clinical indications of neck muscle weakness, progressive weakness of upper and lower limbs (proximal > distal), areflexia of upper and lower limbs and pes cavus. There is positive family history of similar illness in her brother. She is suspected to be affected with hereditary neuropathy or chronic progressive sensory motor syndrome and has been evaluated for pathogenic variations.

RESULTS

PATHOGENIC VARIANT CAUSATIVE OF THE REPORTED PHENOTYPE WAS DETECTED

SNV(s)/INDELS

Gene ^a (Transcript)	Location	Variant	Zygosity	Disease (OMIM)	Inheritance	Classification ^b
FGD4 (+) (ENST00000534526.7)	Exon 15	c.2298_2302dup (p.Gly768GlufsTer5)	Homozygous	Charcot-Marie-Tooth disease, type 4H (OMIM#609311)	Autosomal recessive	Pathogenic

Copy Number Variants CNV(s)

No significant CNVs for the given clinical indications that warrants to be reported was detected.

Figure 1: Genetic test report

Synthesis Treasure Edition 2009V (SCHROEVENS F.)

Views: Full repertory Search remedy:

1. Clipboard 1

- MIND - FASTIDIOUS (77) 1
- MIND - FEAR - animals, of (28) 1
- MIND - OBSTINATE (158) 1
- HEAD - PERSPIRATION OF SCALP - Forehead (159) 1
- STOOL - HARD (355) 1
- EXTREMITIES - TINGLING (282) 1
- EXTREMITIES - WEAKNESS - paralytic (36) 1
- GENERALS - FOOD AND DRINKS - pungent things - desire (62) 1
- GENERALS - FOOD AND DRINKS - warm food - desire (46) 1

	phos.	ars.	caust.	alum.	calc.	kal.c.	nux-v.	verat.	lyc.	nat-m.	sil.	sulph.	bell.	bry.	chin.	rufa.	Puls.	tub.	anac.	arg-n.	cocc.	ph-ac.	hep.	nit-ac.	kal.li.	lach.	plo.	sep.	acn.	cham.
(77) 1	1	3	2	1	1	2	2		1	2	1	1			1	1		2	1					1	1	1	1			
(28) 1	1		1	2	1					1	1	1	3		3	1	1	2	1								1			1
(158) 1	1	2	2	3	3	2	3	1	2	1	2	2	3	2	2	1	1	2	3		2	2	2	1	1	1	1	2	3	1
(159) 1	3	2			2	2	1	3	1	1	1	1	1	2	1	1	1	1	1		1	1	2	2	2	2	1	1	2	1
(355) 1	3	2	2	3	3	2	3	3	3	3	3	2	3	1	2	2	2	1	2	2	2	2	3	2	3	3	3	1	1	3
(282) 1	3	1	3	2	2	2	2	3	2	2	2	1	1	2	1	3	1	1	3	2	2	2	2	1	1	1	2	3	2	1
(36) 1	1	1	3	1		2	1	3				1			1			2		1			2						2	
(62) 1	1	1	1	1			1	1		1			2	1	1	1	1		1	1	1	2	1		1		1	1		
(46) 1	1	3			1	1		2		1			2		1						2	2								

Figure 2:Repertorization chart

राष्ट्रीय होम्योपैथी मानसिक स्वास्थ्य अनुसंधान संस्थान
National Homoeopathy Research Institute in Mental Health
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PHYSIOTHERAPY EVALUATION REPORT

Name: [REDACTED]
 Age-25
 Gender-Female
 Hospital I.P. No-11479 Date of assessment-26-10-2022

Medical diagnosis: Charcot Marie Tooth Disease ,Type 4H

Presenting complaints: Patient presented with chief complaints of weakness and tingling sensation of upperlimbs and lowerlimbs .Unable to sitting ,standing and walking.

Range of motion
 Decreased in whole body joints

Muscle strength

- Lower limbs muscle weakness is more than upperlimbs muscle weakness.
- Abdominal muscles are severely weak.
- Tendoachilles tightness present in both ankles.

Muscle power

- Right upperlimb -Grade 2/5
- Right lowerlimb - Grade 1/5
- Left upperlimb - Grade 2/5
- Left lowerlimb - Grade 1/5

On observation
 Built- poor
 Deformity – milg genuvalgum deformity present

Muscle Tone- Flaccidity present

Muscle wasting- present on both upperlimbs and lowerlimbs.

Motor assessment

Coordination /balance- poor

REHABILITATION MEASURES

Strengthening exercises

Coordination exercises

Passive and active range of motion exercises

Balance training

Pelvic strengthening and stabilisation

Core muscles stability exercises

Gait training

At the time of discharge : patient condition is

- Range of motion Increased
- Balance improved
- Muscle strength Increased
- Sitting and standing balance attained
- Now she is able to walk without support
- Hold her baby for about 20-25 minutes.

Aiswarya Bhasi
 (Physiotherapist)

Figure 3: Physiotherapy evaluation report

Table 2- MONARCH INVENTORY

Domains	Yes	No	Not sure/Not applicable	The score applicable for the case
Was there an improvement in the main symptom or condition for which the homeopathic medicine was prescribed?	+2	-1	0	+2
Did the clinical improvement occur within a plausible timeframe relative to the drug intake?	+1	-2	0	+1
Was there an initial aggravation of symptoms?	+1	0	0	0
Did the effect encompass more than the main symptom or condition (i.e., were other symptoms ultimately improved or changed)?	+1	0	0	+1
Did overall well-being improve? (suggest using a validated scale)	+1	0	0	+1
Direction of cure: did some symptoms improve in the opposite order of the development of symptoms of the disease?	+1	0	0	0
Direction of cure: did at least two of the following aspects apply to the order of improvement of symptoms: –from organs of more importance to those of less importance? –from deeper to more superficial aspects of the individual? –from the top downwards?	+1	0	0	Not observed
Did "old symptoms" (defined as non-seasonal and non-cyclical symptoms that were previously thought to have resolved) reappear temporarily during the course of improvement?	+1	0	0	Not observed
Are there alternate causes (other than the medicine) that—with a high probability— could have caused the improvement? (Consider known course of disease, other forms of treatment, and other clinically relevant interventions)	-3	+1	0	-3
Was the health improvement confirmed by any objective evidence? (e.g., laboratory test, clinical observation, etc.)	+2	0	0	+2 (video recording and assessment report by physiotherapist)
Did repeat dosing, if conducted, create similar clinical improvement?	+1	0	0	+1
Total score				+5