

Effect of Sri Lankan Traditional treatment regimen on *Vata Roga* occurs after Hyperventilation syndrome – A Case study

E.R.H.S.S. Ediriweera¹ A.P. Kumara²

¹Senior Professor, Department of Nidana Chikithsa, Institute of Indigenous Medicine, University of Colombo, Rajagiriya, Sri Lanka.

²Ayurveda Physician, Department of Ayurveda, Colombo, Sri Lanka

Abstract:

Various factors are responsible for occurrence of *Vata Roga* including psychological factors such as sorrow, excessive thinking and worries. Hyperventilation syndrome may be present in many conditions and in situations including worries or anxiety. A patient suffering from *Vata Roga* occurring after hyperventilation syndrome was treated for eight days. Weakness in right hand and leg, ataxia, muscle tone, peri-oral numbness, dry mouth, agitation, staring blankly with suppressed emotions, dizziness, impaired appetite and sleep were present in the patients. These clinical features manifest mainly due to vitiation of *Vata Dosha* and also due to vitiation of *Kapha Dosha*. Six separate medicines, namely *Denibadi Kashaya*, *Candrakalka*, *Mahadalu Anupana*, *Seetarama Vati*, *Nirgundi Taila* and *Sattavadi Taila* were administered orally and externally in order to pacify vitiated *Vata* and *Kapha Dosha*. These medicines are widely used to treat *Vata Roga*, especially *Pakshagatha*. Selected medicines possess the properties of pacifying vitiated *Vata Dosha* and *Kapha Dosha*. *Sattavadi Taila* helps to normalize mental and emotional state of a patient. Therefore, complete relief was obtained after completion of eight days of treatment. It is determined that selected treatment regimen is beneficial in management of *Vata Roga* occurs after Hyperventilation syndrome.

Keyword: Hyperventilation syndrome, Sri Lankan Traditional medicine, *Vata Roga*.

Received: 10.11.2020

Revised: 09.12.2020

Accepted: 23.12.2020

Quick Response code



*CORRESPONDING AUTHOR:

Senior Prof. (Mrs.) E.R.H.S.S. Ediriweera

Professor, Department of Nidana Chikithsa,
Institute of Indigenous Medicine, University of
Colombo, Rajagiriya, Sri Lanka.

E-mail: ayurvedadocsujatha@yahoo.com

Introduction:

Vata Roga is a disease described in Ayurveda. According to Ayurveda, psychological factors such as *Shoka* (sorrow) and *Chintha* (excessive thinking) are also responsible for occurrence of *Vata Roga*.^[1] Worries, anxiety and hysteria are some of the causes of Hyperventilation syndrome.^[2] Features of hyperventilation syndrome are panic attacks with fear, terror and impending doom accompanied by some or all the following clinical features such as dyspnoea, palpitation, chest pain or discomfort, choking sensation, dizziness, parasthesia, sweating and carpopedal spasms.^[3] In hyperventilation syndrome, mainly *Vata Dosha* is vitiated and therefore, it can be considered as a type of *Vata Roga*. Sri Lankan traditional physicians treat *Vata Roga* caused by mental as well as physical causes successfully. *Denibadi Kashaya*, *Chandra Kalka* with *Mahadalu Anupana*, *Seetharama Vati*, *Sattavadi Taila* and *Nirgundi Taila* are some of the drugs used to treat *Vata Roga*. Therefore, these drugs were selected to treat a patient suffering from *Vata Roga* occurring after hyperventilation syndrome in the present study.

Case Report:

A 22 years old young boy was admitted to Ayurveda Teaching Hospital, Borella Sri Lanka for treatment of weakness in the right upper and lower limbs, dizziness, pain in the left eye and left side of the head, peri oral parasthesia, dry mouth, impaired appetite and sleep with a history of hyperventilation attack before 8 days. He is a university student who had a love affair for about one year. This love affair was broken off before

5 months, prior to commencement of the disease. He spent his life thinking of previous memories about his earlier girlfriend. On the 150th day after breaking the love affair, he was suddenly unconscious and had a seizure with tachypnoea for period of 30 minutes. Then the patient was admitted to a western medical hospital. Investigations such as fasting blood sugar, lipid profile, CT scan of the brain had been carried out. All the investigations were within normal limits and CT scan in the brain was also normal. The patient was diagnosed as hyperventilation syndrome by the physicians at National Hospital, Colombo, Sri Lanka and had treated with western modern treatment for 5 days. During this period, the patient was treated with 2mg of diazepam twice a day, two tablets of Paracetamol (weighing 500mg) and Vitamin B-100 complex thrice a day after meals and discharged from the hospital.

On the 8th day after the attack, the patient was admitted to the Ayurveda teaching hospital, Borella, Sri Lanka. All the details of the patient including history, dietary habits and addictions were recorded and thoroughly examined before beginning the treatment. The patient was examined and was observed that he was having weakness of the right upper and lower limb, ataxia (lack of coordination), hypertonia at right upper and lower limb, superficial and deep tendon reflexes are normal. He was having peri-oral numbness, dry mouth, agitation and was staring blankly with suppressed emotions. The severities of the clinical features were recorded using a specially prepared grading scale as given below. After

normalization of mental status, the patient's written consent was obtained in order to publish the data. Ataxia was assessed by using the scale for the assessment and rating of ataxia (SARA).^[4] The patient was kept on normal diet without any restrictions. The physician took good care of this patient and was always speaking to him encouragingly.

Grading scale

1. Tendon reflexes
Normal = 0 = Normal
Mild = 1 = Positive
Moderate = 2 = Brisk
Severe = 3 = Very Brisk
More severe = 4 = Clonus
2. Muscle power (right hand and right leg)
Grade 0 = No contractions
Grade 1 = Flicker or trace of contraction
Grade 2 = Active movement with gravity elimination
Grade 3 = Active movement against gravity
Grade 4 = Active movement against gravity and resistance
Grade 5 = Normal
3. Muscle tone (right hand and right leg)
Grade 0 = Normal muscle tone
Grade 1 = Hypotonia
Grade 2 = Hypertonia
4. Peri-oral numbness
Grade 0 = No peri-oral numbness
Grade 1 = Occasional peri-oral numbness
Grade 2 = Intermittent peri-oral numbness
Grade 3 = Often peri-oral numbness
Grade 4 = Always peri-oral numbness
5. Dryness in mouth
Grade 0 = No dryness in mouth
Grade 1 = Occasional dryness in mouth
Grade 2 = Intermittent dryness in mouth
Grade 3 = Often dryness in mouth
Grade 4 = Always dryness in mouth
6. Agitation
Grade 0 = Normal, No agitation
Grade 1 = Agitate occasionally
Grade 2 = Agitate intermittently
Grade 3 = Agitate often
Grade 4 = Always agitate
7. Staring blankly with suppressed emotions
Grade 0 = Normal, Not Staring blankly with suppressed emotions, responds well to commands
Grade 1 = Occasionally staring blankly with suppressed emotions but responds well to commands
Grade 2 = Staring blankly with suppressed emotions, sometimes responding to commands
Grade 3 = Staring blankly with suppressed emotions, occasionally responding to commands

Grade 4 = Staring blankly with suppressed emotion and not responding to commands

8. Dizziness

Grade 0 = No dizziness

Grade 1 = Occasional dizziness

Grade 2 = Intermittent dizziness

Grade 3 = Often dizzy

Grade 4 = Always dizzy

9. Impaired appetite

Grade 0 = Normal appetite

Grade 1 = Appetite impaired occasionally

Grade 2 = Appetite impaired intermittently

Grade 3 = Appetite impaired often

Grade 4 = Aversion to food

10. Impaired sleep

Grade 0 = Normal sleep

Grade 1 = Sleep disturbed occasionally

Grade 2 = Sleep disturbed intermittently

Grade 3 = Sleep disturbed often

Grade 4 = Sleep disturbed very frequently

Intervention

The patient was treated with six separate medicines for 8 days. Details of the treatment are given in table-1.

Table-1: Treatment plan:

Day 1-8	Treatment
Internall	120 ml of <i>Denibadi Kashaya</i> twice a day after food
	2.5g of <i>Candrakalka</i> with 30 ml of <i>Mahadalu Anupana</i> twice a day after food
	3 pills of <i>SeetaramaVati</i> twice a day with water after meals
External	<i>Shirsha Abyanga</i> was carried out for thirty minutes once a day at 10.00a.m. using a mixture of 15ml each of <i>Nirgundi Taila</i> and <i>Sattavadi Taila</i>

Preparation of drugs

Denibadiya Kashaya was prepared according to the formula given in Ayurveda Pharmacopeia of Sri Lanka. [5] Method of preparation of *Denibadiya Kashya* is explained in detail in previous research work. [6] *Candrakalka* and *Mahadalu Anupana* was prepared according to Ayurveda Pharmacopeia and *Vatika Prakaranaya*, respectively. [7,8] Methods of preparation of *Candrakalka* and *Mahadalu Anupana* are explained in detail by Ediriweera and Perera (2011). [9] *Nirgundi*

Taila was prepared as described in Ayurveda Pharmacopeia. [10] *Seetarama Vati* is prepared according to Ayurveda Pharmacopeia. [11] Methods of preparation of *Seetarama Vati* is explained in detail by Maragalawatta and Goyal (2019). [12] Preparation of *Sattavadi Taila* is described below.

Preparation of Sattavadi Taila:

Sattavadi Taila was prepared according to the Sri Lankan traditional method described in Ayurveda Pharmacopeia. 120g each of roots of *Caesalpinia sappan* (Family:

Fabaceae; Sinhala name: *Pathagi*), *Moringa oliefera* (Family: Moringaceae; Sinhala name: *Murunga*), *Glycosmis pentaphylla* (Family: Rutaceae; Sinhala name: *Dodampana*), *Calotropis gigantea* (Family: Asclepidaceae; Sinhala name: *Wara*), *Citrus madurensis* (Family: Rutaceae; Sinhala name: *Naran*), *Toddalia asiatica* (Family: Rutaceae; Sinhala name: *Kudumirissa*), *Plumbago indica* (Family: Plumbaginaceae; Sinhala name: *Ratnitul*), *Cleome gynandra* (Family: Capparaceae; Sinhala name: *Wela*), *Crotalaria labumifolia* (Family: Fabaceae; Sinhala name: *Yakberiya*), *Ocimum tenuiflorum* (Family: Lamiaceae; Sinhala name: *Madurutala*), *Anisomeles indica* (Family: Laniaceae; Sinhala name: *Yakwanasssa*), *Caesalpinia bonduc* (Family: Fabaceae; Sinhala name: *Kumburu*), *Madhuca longifolia* (Family: Sapotaceae; Sinhala name: *Mee*), *Acalypa indica* (Family: Euphorbiaceae; Sinhala name: *Kuppameniya*), *Aristolochia bracteolata* (Family: Aristolochiaceae; Sinhala name: *Sassada*), *Citrus aurantifolia* (Family: Rutaceae; Sinhala name: *Dehi*), *Vitex negundo* (Family: Verbenaceae; Sinhala name: *Nika*), *Citrus madurensis* (Family: Rutaceae; Sinhala name: *Dodam*), *Pterospermum suberifolium* (Family: Sterculiaceae; Sinhala name: *Wellangiriya*), *Pavetta indica* (Family: Rubiaceae; Sinhala name: *Pavatta*), *Alternanthera sessilis* (Family: Amaranthaceae; Sinhala name: *Mukunuwenna*), *Crateva religiosa* (Family: Capparaceae; Sinhala name: *Lunuwarana*), *Mollugo cerviana* (Family: Fabaceae; Sinhala name: *Pathpadagam*), *Ceiba pentandra* (Family: Bombacaceae; Sinhala name: *Imbul*),

Indigofera tinctoria (Family: Fabaceae; Sinhala name: *Avariya*) and *Azadrachta indica* (Family: Meliaceae; Sinhala name: *Kohomba*); rhizomes of *Cyperus rotundus* (Family: Cyperaceae; Sinhala name: *Kalanduru*), *Zingiber officinale* (Family: Zingiberaceae; Sinhala name: *Inguru*) and *Acorus calomus* (Family: Acoraceae; Sinhala name: *Wadakaha*); seeds of *Brassica juncea* (Family: Brassicaceae; Sinhala name: *Aba*) and *Piper nigrum* (Family: Piperaceae; Sinhala name: *Gammiris*); stem of *Tinospora cordifolia* (Family: Menispermaceae; Sinhala name: *Rasakinda*); stem barks of *Azadrachta indica* (Family: Meliaceae; Sinhala name: *Kohomba*) and *Limonia acidissima* (Family: Rutaceae; Sinhala name: *Divul*), Pericarp of *Terminalia chebula* (Family: Combretaceae; Sinhala name: *Aralu*) and *Terminalia belerica* (Family: Combretaceae; Sinhala name: *Bulu*); fruits of *Phyllanthus embelica* (Family: Phyllanthaceae; Sinhala name: *Nelli*); cloves of *Allium sativum* (Family: Alliaceae; Sinhala name: *Sudulunu*) and leaves of *Pterospermum suberifolium* (Family: Sterculiaceae; Sinhala name: *Wellangiriya*) was taken, mixed with 76.8 liters of water and boiled down to 19.2 liters so as to prepare the decoction. 19.2 liters of each of fresh fruit juice of *Citrus madurensis* (Family: Rutaceae; Sinhala name: *Dodam*), *Citrus aurantifolia* (Family: Rutaceae; Sinhala name: *Dehi*), *Garcinia Cambogia* (Family: Clusiaceae; Sinhala name: *Goraka*) and juice of fresh rhizome of *Curcuma zedoaria* (Family: Zingiberaceae; Sinhala name: *Haran Kaha*) were added to the decoction and mixed well.

9.2 liters each of oil of castor oil, sesame oil, ghee, Margosa oil and oil of seeds of *Madhuca longifolia* were also added to the above mixture.

A paste prepared by grinding 62.5g each of seeds of *Coriandrum sativum* (Family: Apiaceae; Sinhala name: *Kottamalli*), *Pimpinella anisum* (Family: Apiaceae; Sinhala name: *Shatakuppa*), *Trigonella foenum-graecum* (Family: Fabaceae; Sinhala name: *Uluhal*), *Trachyspermum roxburghianum* (Family: Apiaceae; Sinhala name: *Asamodagam*), *Carum cavi* (Family: Umbelliferae; Sinhala name: *Devduru*) and *Nigella Sativa* (Family: Ranunculaceae; Sinhala name: *Kaluduru*); roots of *Saussurea lappa* (Family: Compositae; Sinhala name: *Suvandakottam*), *Aconitum heterophyllum* (Family: Ranunculaceae; Sinhala name: *Athividayam*) and *Picrorhiza scrophulariiflora* (Family: Scrophulariaceae;

Sinhala name: *Katukarosana*); stem of *Cedrus Deodara* (Family: Pinaceae; Sinhala name: *Devadaru*); resin of *Gardenia crameri* (Family: Rubiaceae; Sinhala name: *Galis*) and *Ferula asafoetida* (Family: Apiaceae.; Sinhala name: *Perunkayam*), cloves of *Allium sativum* (Family: Alliaceae; Sinhala name: *Sudulunu*), fruits of *Piper longum* (Family: Fabaceae; Sinhala name: *Tippili*), *Smilax glabra* (Family: Liliaceae; Sinhala name: *Cheena Ala*), *Navasaram* (Ammonium Chloride), *Manashila* (red arsenic), *Palmanikkam* (Copper sulphate) together and this paste added to above mixture. This mixture was heated on a low fire to prepare oil. When it reaches Sama Paka stage, oil was taken out of fire, allowed to cool and strain. This is known as *Sattavadi Taila*.^[13]

Table-2: Reduction of Symptoms:

Symptoms	Before treatment	After treatment	
	Grade	Grade	Percentage of relief
Weakness in right hand	3	Grade 0	100%
Weakness in right leg	3	Grade 0	100%
Ataxia	6	Grade 0	100%
Dizzines	3	Grade 0	100%
Muscle tone	2	Grade 0	100%
Peri-oral numbness	4	Grade 0	100%
dry mouth	3	Grade 0	100%
Agitation	3	Grade 0	100%
Staring blankly with suppressed emotions	4	Grade 0	100%
Dizziness	3	Grade 0	100%
Impaired sleep	3	Grade 0	100%
Impaired appetite	2	Grade 0	100%

Results and Discussion:

The patient's CT scan of the brain was normal and no exaggeration or diminution of the tendon reflexes were observed before treatment. After 8 days of treatment, all the symptoms were reduced by 100% as shown in Table 2.

According to Ayurveda, *Shoka* (sorrow) and *Chintha* (excessive thinking) leads to vitiation of Vata Dosha. [1] Worries, anxiety and hysteria are some of the causes of Hyperventilation syndrome. [2] After breaking up of the love affair, the patient has spent a sad life. This may have led to hyperventilation syndrome and manifestation of *Vata Roga* after hyperventilation syndrome.

After 5 days of treatment with western modern medicines, from 8th to 15th day of illness, the patient was treated with Ayurveda medicines which are used in treatment of *Pakshagatha* (paralysis), a type of *Vata Roga*, in Sri Lankan traditional medicine. Decoction of *Denibadiya* is given in early stages of *Pakshagata* (paralysis) to induce *Srotas Shodhana* property (remove obstructions) and to pacify vitiated *Vata* and *Kapha Dosha*. [5, 6] *Candrakalka* with *Mahadalu Anupana* is also used in treatment of early stages of *Pakshagata* to remove *Srotoavarodha* (obstructions in channels) as it possesses properties of *Vata Kapha Shyamaka*, *Amapachana* and *Srotoshodhaka*. [7,8,9] *Seerharama Vati* is indicated in early stages of *Pakshagata*, *Vata Roga*, *Jwara*, *Athisara* and *Sutika Roga*. [11]

Sattavadi Taila is *Nidrakaraka* and is indicated in *Unmada*, *Apasamara* and *Sutikonmada* in the form of *Pana*, *Abhyanga*

and *Nasya*. [13] *Nirgundi Taila* is indicated in treatment of *Vata Kaphaja Shiroroga*, *Peenasa* and *Karnanada*. [10] As the patient had exhibited clinical features mainly occurring due to vitiation of *Vata Dosha* and affected nervous system (weakness of the right upper and lower limb, ataxia, hypertonia and peri-oral numbness), the medicines use in treatment of early stages of *Pakshagata* and vitiated *Vata Dosha* were administered. As the patient was staring blankly with suppressed emotions, dryness in the mouth and agitation, *Shirsha Abhyanga* was carried out using *Sattavadi Taila* which induce sleep, reduce anxiety and alleviates mental disorders. In this patient, mainly *Vata Dosha* is vitiated and *Kapha Dosha* is associated as he is suffering from impaired appetite and dizziness. Therefore, *Nirgundi Taila* was also used in *Shirsha Abhyanga* as it is beneficial in diseases occurring due to vitiation of *Vata Kapha Dosha*.

Hyperventilation syndrome is a psychosomatic disorder. The patient's investigation results were within normal ranges. Therefore, there may only be a psychological defect in the patient. *Sattavadi Taila* helps to normalize mental and emotional state of the patient and helps to pacify vitiated *Vata Dosha* and *Kapha Dosha*. The medicines that were administered orally and externally have property of pacifying vitiated *Vata Dosha* mainly and also property of pacifying vitiated *Kapha Dosha*. Due to these properties of the medicines administered, the patient showed 100% reduction in all the symptoms.

Conclusion:

Oral administration of decoction of *Denibadiya*, *Candrakalka* with *Mahadalu Anupana*, *Seetarama Vati* and *Shirsha Abhyanga* with *Sattavadi Taila* is effective in management of *Vata Roga* occurring after Hyperventilation syndrome.

Acknowledgement:

Authors are thankful to medical and nonmedical staff of Ayurveda Teaching Hospital, Borella, Sri Lanka.

References:

1. Murthy KRS. Madhava Nidanam, Roga Vinishchaya 22/1-3, Chaukhambha Orientalia, Varanasi, India 1986; pp 79
2. Golwalla, AF and Golwalla, SA, Medicine for students, Bombay, India, 1988; pp 1058
3. Kumar, P. and Clark, M., Clinical medicine, A textbook for medical students and doctors, ELBS with Bailliere Tindall, London, 1990; pp985.
4. Scale for the assessment and rating of ataxia (SARA), Available from: <http://www.ataxia-study-group.net/html/about/ataxiascales/sara/SARA.pdf> 2, [Last Accessed on 2020 Apr 25]
5. Anonyms, Denibadi Kwatha, Kwatha Kanda /77, Ayurveda Pharmacopeia Vol 1 Part One, Department of Ayurveda, Colombo, Sri Lanka, 1976; pp 139.
6. Ediriweera ERHSS, De Silva JPRM. Effect of Treatment Regimen Practiced in Sri Lanka with Denibadi Kashaya on Pittanubandha Amavata wsr to Systemic Lupus Erythematosus (SLE) – A Case Study, International Journal of Ayush Case Reports 2019; 3(4): 278-286.
7. Anonyms, Chandrakalka, Deshiya Kalka Kanda /2, Ayurveda Pharmacopeia Vol 1 Part One, Department of Ayurveda, Colombo, Sri Lanka, 1976; pp 120-121
8. Anonyms, Vatika Prakaranaya or Treatment on Pills, 4th edition, Mahadalu Anupana, Granthaparakasha press, Colombo, Sri Lanka, 1933; pp 23-24
9. Ediriweera ERHSS, Perera MSS. Clinical study on the efficacy of Chandra Kaka with Mahadalu Anupana in the management of Pakshaghata (Hemiplegia), Journal Ayu 2011; 32(1): 25-29.
10. Anonymous, Nirgundi Taila, Taila Khanda /47, Ayurveda Pharmacopeia Volume 1 Part 1, Department of Ayurveda, Colombo, Sri Lanka, 1975; pp278.
11. Anonymous, Seetarama Vati, Vati Khanda/20, Ayurveda Pharmacopeia Volume 1 Part 1, Department of Ayurveda, Colombo, Sri Lanka, 1975; pp188.
12. Maragalawaththa, MGSK, Mandip G. Efficacy of Seetarama Vati (A Sri Lankan traditional drug) and Vatari Guggulu in the management of Amavata (rheumatoid arthritis)-an open labeled randomized comparative clinical trial, Journal Ayu 2019; 40(2):97-103.
13. Anonymous, Sattavadi Taila, Taila Khanda /94, Ayurveda Pharmacopeia Volume 1 Part 1, Department of Ayurveda, Colombo, Sri Lanka, 1975; pp300.

Conflict of interest: Author declares that there is no conflict of interest.

Guarantor: Corresponding author is guarantor of this article and its contents.

Source of support: None

How to cite this article:

Ediriweera E.R.H.S.S., Kumara AP. Effect of Sri Lankan Traditional treatment regimen on *Vata Roga* occurs after Hyperventilation syndrome – A Case study. Int. J. AYUSH CaRe. 2020; 4(4):213-220.