

# Pakshaghat and its Management through Panchakarma: A Case Study

## Research Article

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### Abstract

*Vata* among tridosha is considered as the controller of everything in the *Sharira*. Vitated *Vata* itself effects the *Dusyas* which pervades the entire body or a part of it and gives rise to different types ailment is called *Vatavyadhi*. *Pakshaghata* is one of the important diseases of such criteria which is popularly known as Hemiplegia. A 60 years old male Patient, K/C/O of HTN Since 3 year & Stroke 3 Months ago complaining of *Kinchita Vak-Aspata* (incomplete speech), *Bhar-Vruddhi* (Heaviness of left limbs), *Vama bahu Karma alpata* (Left upper limb weakness), *Vama amsha sandhi stabhata* (Left shoulder stiffness) since 3 Month. Patient was on various treatment methods for the past 2 months but did not get complete improvement. He came to Parul Ayurveda Hospital. The patient was treated with *Panchakarma* procedure, *Shamana Aushadhi* and Physiotherapy. This study shows the effective result of *Panchakarma* treatment along with *Shamana Aushadhi* and Physiotherapy in *Pakshaghata* disease. It also helps to understand the pathophysiology of *Pakshaghata* through *Ayurveda*. In this study an attempt has been made to describe all Scientific effect of *Panchakarma procedures*, *Shaman Aushadhis* and effect of Physiotherapy has been explained in this case.

**Key Words:** *Pakshaghata*, *Panchakarma procedure*, *Shamana aushadhi*.

### Introduction

*Pakshaghata* is one among the *vatavyadi*, considered under *astamahagada*, which is *swabhavatahduschikitsya*. When the greatly aggravated *vata* invades the *urdhwa*, *adha* and *thiryakgatahdhamanis*, then it destroys any one half of the body which is called as *pakshaghata*. By this, affected side of the body becomes incapable of any work. *Basti* is considered as best treatment in *Vatavyadhi*, but for *pakshaghata sneha* is the line of treatment. *Acharya Charaka* also explained *swedana* and *Sneha yukta virechana* in *pakshagata* (1). The synonyms of *Pakshaghata* are *Pakshavada*, *Ekangaroga* and *Sarvangaroga* (2). This condition of *Pakshaghata* can be correlated with the Hemiplegia in the modern science as majority of symptoms are same. This disease is also called as Paralysis in Layman language. It affects the one-half side of body mainly including upper limb and lower limb. Many times, it also affects the functions of speech and facial muscles. Mainly due to stroke or interruption of blood supply to the brain causes Hemiplegia. The one of the leading causes of disability and death in India is the Stroke. The prevalence of stroke in our country ranges from 40-270

per 100000 population (3). On the basis of morbidity out of all cases 45% patients of stroke can live independently, 22% patients become dependent on others and 20% patients' needs admission in hospitals (4). There are mainly two types of stroke. Ischemic and Hemorrhagic. Ischemic stroke is more common than Hemorrhagic stroke. Due to interruption of blood supply Ischemic strokes take place, while Hemorrhagic strokes are the ones which results from rupture of blood vessels or an abnormal vascular structure (5).

In the present case study, the treatment was done for the ischemic stroke. Such conditions can be managed by *Ayurvedic* treatment and it shows very effective results in acute conditions also. *Panchakarma* is one of the key treatments for diseases like *Pakshaghata*. In this case study treatment like *Bahya Rukshana karma* followed by *Bahya snehana*, *Classical Virechana*, Physiotherapy was given along with some *Shamana Aushadhis*.

### Case Study

A male patient of 60 years old, appeared in Parul Ayurved Hospital Panchakarma-OPD (OPD NO – 20020944) on 9/12/2020 with the **chief complaint of:**

Weakness in left upper and lower limb	since 3 months
Pain and stiffness in left Shoulder joint.	
Difficulty while raising left arm	

### Associated complaints

- Pain in low back region since 2-3 weeks
- Headache

At the time of admission patient was conscious and well oriented.

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**Past history**

- H/O Hypertension Since 2 years- On medication Since 3 years (Tab Atenolol IP 50 mg 1-0-0 A/F)
- H/O CVA Stroke 3 Months back (Tab Atorvastatin 40mg 0-0-1 A/F)
- Not K/C/O –Allergy, Typhoid, Malaria, Dengue.
- No H/O – Trauma or Accidental Injury

**On Examination**

- General condition: Moderate
- Pulse Rate: 75/min
- BP: 140/80 mm of Hg
- RR: 18/min
- HR: 76/min
- Mala: Samyak
- Kostha: Mrudu
- Mutra: Regular
- Nidra: Sound
- Kshudha: Samyak
- Jihva: Liphtha

<b>Central Nervous System Examination</b>		
<b>HMF-Higher Mental Function</b>		
Consciousness		Fully Conscious
Orientation to	Time	Intact
	Place	
	Person	
Memory	Immediate	Intact
	Recent	
	Remote	
Hallucination and Delusion		Absent
Speech disturbance		Absent
Handedness		Right
<b>Cranial Nerve Examination</b>		
Olfactory	Smell sensation	Intact
Optic	Color vision	NAD
<b>Oculomotor, Trochlear, Abducent Nerve</b>		
Eye ball movement		Possible in all directions
Pupil	Position	NAD
	Shape	
	Size	
	Symmetry	
Ptosis		Absent
<b>Trigeminal</b>		
Sensory	Touch, Pain and pressure sensation	Intact
Motor	Clenching of teeth	Possible
	Lateral movement of Jaw	Possible
<b>Facial</b>	Forehead frowning	Possible, Equal in both sides
	Eyebrow raising	Possible, Equal in both sides
	Eye closure	Possible, Equal in both sides
	Teeth showing	Normal
	Blowing of cheek	Possible
<b>Glossopharyngeal and Vagus</b>		
	Position of uvula	Centrally placed
	Taste sensation	Intact
	Gag reflex	Normal

**Hypoglossal**

	Protrusion of tongue	Complete protrusion possible
	Tongue movements	Possible
<b>Motor</b>		
<b>Involuntary Movements</b>		Absent
<b>Muscle Bulk</b>	<b>RT</b>	<b>LT</b>
Biceps	27.5 cm	26.5 cm
Forearms	24.5 cm	23 cm
Mid-thigh	45.5 cm	45 cm
Calf muscle	30.5 cm	29.5 cm
<b>Muscle Tone</b>	<b>RT</b>	<b>LT</b>
Upper limb	N	Hypo
Lower Limb	N	N
<b>Power</b>	<b>RT</b>	<b>LT</b>
Upper Limb	5	4
Lower limb	5	5
<b>Coordination</b>		
	Upper limb	Finger nose test coordination present
	Lower limb	Knee heel test
<b>Gait</b>		Normal
<b>Reflex</b>		
<b>Superficial</b>		
Abdominal reflex		Present
<b>Deep Reflex</b>	<b>RT</b>	<b>LT</b>
Biceps jerk	Normal	Diminished
Triceps jerk	Normal	Diminished
Knee jerk	Normal	Normal
Ankle jerk	Normal	Normal
Clonus - Patella	Absent	Absent
Clonus - Ankle	Absent	Absent
Babinski reflex	Absent	Absent
<b>Sensory System</b>		
<b>Superficial</b>		
Touch		Intact
Temperature		Intact
Pain		Intact
<b>Deep</b>		
Crude touch		Present
Vibration		Present
Pressure sense		Present

**Table 1: Observation**

Sr. No	Signs and Symptoms	Before Treatment	After treatment
1	Facial deviation	No	No
2	Shoulder elevation	No	No
3	Sensory Aphasia	No	No
4	Trunk balance	No	No
5	Elbow-flexion –extension	No	Yes
6	Forearm supination-pronation	No	Yes
7	Wrist flexion-extension	No	Yes
8	Grip power	No	Yes
9	While no initiation Holding of object	No	Yes
10	Grasp objects	No	Yes
11	Release of object	No	Yes
12	Catching of object	No	Yes
13	Throwing of object	No	Yes
14	Tying the knot	No	Yes
15	Clothing	Yes	Yes
16	Feeding with hand	No	Yes
17	Holding and drinking glass of water	No	Yes
18	Standing without support	Yes	Yes
19	Standing balance	Yes	Yes
20	Squatting	No	Yes
21	Getting up from squatting position	No	Yes
22	Climbing the stairs	No	Yes
23	Toilet activity	Yes	Yes
24	Bathing	Yes	Yes
25	Crossing the road	No	Yes
26	Tingling sensation	Yes	No

**Table 2: Muscle power**

SR NO.	BEFORE TREATMENT		AFTER TREATMENT	
	Extremities	Grades	Extremities	Grades
1	Rt. Upper Limb	5- Normal Power	Rt. Upper Limb	5- Normal Power
2	Rt. Lower Limb	5-Normal Power	Rt. Lower Limb	5- Normal Power
3	Lt. Upper Limb	4-Movement against gravity and some resistance.	Lt. Upper Limb	4-Movement against gravity and some resistance.
4	Lt. Lower Limb	4- Movement against gravity and some resistance.	Lt. Lower Limb	5- Normal Power

**Table 3: Intervention**

Date	Shamana	Shodhana
10-12-2020 to 12-12-2020	<ul style="list-style-type: none"> <li>Aampacak vati- 2-0-2 B/F</li> <li>Tapyadi loha-2BDA/F</li> <li>Cap Palsineuron 2BD A/F</li> <li>Sutshekar rasa 2BD A/F</li> <li>Phalatrikadi Kashaya- 30 ml BD B/F</li> <li>Pathyadi kashya 30 ml BD B/F</li> </ul>	<ul style="list-style-type: none"> <li><i>Sarvanga Udvartana</i> with <i>Yava Lotta+ Triphala churna</i> followed by <i>Nadi sweda</i>.</li> <li>Physiotherapy</li> </ul>
12-12-2020 to 18-12-2020	<ul style="list-style-type: none"> <li>Aampacak vati- 2-0-2 B/F</li> <li>Sutshekar rasa 2BD A/F</li> <li>Phalatrikadi Kashaya- 30 ml BD B/F</li> <li>Pathyadi kashya 30 ml BD B/F</li> </ul>	<ul style="list-style-type: none"> <li><i>Shirodhara</i> with <i>Jatamansi oil</i>.</li> <li>Physiotherapy</li> <li>Plan for <i>Virechana karma</i></li> </ul>
19-12-2020 to 21-12-2020		<ul style="list-style-type: none"> <li><i>Shodhanartha Snehapan</i> with <i>Guggul Tikta ghrita</i></li> </ul>
22-12-2020 to 24-12-2020		<ul style="list-style-type: none"> <li><i>Sarvanga Abhyanga</i> with <i>Nirgundi Tail</i> followed by <i>Patra Pinda Sweda</i></li> </ul>

25-12-2020	<ul style="list-style-type: none"> <li>• <i>Sarvanga Abhyanga</i> with <i>Nirgundi Tail</i> followed by <i>Nadi Sweda</i></li> <li>• <i>Virechana karma</i> with <i>Trivrut Avleha -40 gms Anupana Draksha fanta</i></li> </ul>
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*Deepana Pachana* from 12-12-2020 to 18-12-2020 was done in which *Nirama lakshans* were observed.

From 19-12-2020 to 21-12-2020 *Abhyantra Snehapana* with *Guggul Tikta Ghrita* was given to the patients. Until *Samyak Snigdha lakshana* appears.

*Vishrama Kala* from 22-12-2020 to 24-12-2020. *Sarvnaga Abhyanga* with *Nirgundi Tail* followed by *Patra Pinda Sweda*.

**Table 4: Dose of Snehapana**

Date	Intake time	Dose	Time of Hunger
19-12-2020	6:45 AM	30 ML	11:40 AM
20-12-2020	7 AM	50 ML	12:30 PM
21-12-2020	6:50 AM	90ML	1:45 PM

Daily Jiryamana and Jirna lakshnas were noted. After achievement of *Samyak Sneha Lakshana- Abhyanga* with *Nirgundi Tail* followed by *Patra Pinda Sweda* was done for 3 days.

On *Virechan Karma* day, first *Abhyanga* with *Nirgundi Tail* and *Nadi Sweda* was given to the patient, before administration of medicine, BP (130/90 mm of Hg) and pulse (74/min) was monitored.

For *Virechan- Trvrit Lehya* (40gm) was given at 10.30am (*Shleshma Kal Gate Gyatva*).

### Anupana

*Draksha Fanta* 50 ml was given and Patient was advised to take Luke warm water for whole day. All the instructions were given to the patient e.g., drinking hot water in between Vegas, avoidance of direct air, sleep during day to avoid any complications. A chart was maintained to note down Time of starting of Vegas, contents etc. in the below form:

Time of drug administration	Quantity	Time of Vega	Contents of each Vega	Vitals (B.P., PULSE)	Signs, Symptoms	Complications if any
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### Observation during Virechana

1st Vega started at 11:15Am. Last Vega i.e., 16th observed at 7.10pm. It was observed that at constant interval patient had *Virechan Vegas* up to 5pm. After that frequency decreased. Depending upon observations done during the whole day, below findings were noted:

**Table 5**

<i>Vegiki</i>	<i>Madhyama shuddhi (16 vegas)</i>
<i>Lengiki</i>	<i>Samyak Virechan Lakshana</i>
<i>Manik</i>	<i>Madhyama</i>
<i>Aantiki</i>	<i>Kapha</i>

*Samsarjana krama* was advised after the completion of *Virechan* procedure. *Samsarjana karma* was advised for 5 days.

In 1st *Annakala Peya* was advised. Gradually *Ahara* was changed (*Laghu to Guru*), finally normal diet was given in the evening of 5th day. After the completion of *Samsarjana krama*, Shaman medicine was started to pacify the remaining vitiated *Vataadi Dosha*.

### Discussion

In an ischemic stroke, there will be reduction in bloody supply to any part of brain tissue, which leads to dysfunction of the that part of brain tissue. About 30-40% of Ischemic Strokes are termed as Cryptogenic (i.e., one can't be able cause of its origin). Several classification systems for acute ischemic stroke the OSCP i.e., Oxford Community Stroke Project classification (also called as the Bamford or Oxford

classification) relies generally on the initial symptoms of stroke, based on the extent of these stroke symptoms, stroke episode is classified as, total anterior circulation infarct (TACI), partial anterior circulation infarct (PACI), lacunar anterior circulation infarct (LACI) or posterior circulation infarct (POCI). These four types of infracts predict the extent of the stroke, the area of the brain affected, the underlying cause and the its prognosis (6).

Due to severe disability and dependency *Pakshaghata* can be considered as one of the major diseases. Our Acharyas have given the line of treatment for *Pakshaghata*. In *Sushruta Samhita*, Acharya has given the treatment protocol in the sequence of *Snehana* followed by *Swedan Mrudu Samshodhana* and *Basti Chikitsa* (7).

In *Charaka Samhita*, Acharya has given the protocol like *Sweda, Sneha, and Virechana* (8).

However, in the present study treatment protocol was decided on the basis of the condition of the *roga* and *rogi*.

### Abhyanga

*Sira Snayu Sankochana* is mainly occurs in *Pakshaghata* hence *Snehana* is very essential for such condition. By the use of *Snehana* even the dry wood can bend (9). *Abhyanga* helps innourishing and strengthening the muscles of upper limb and lower limb. Therapeutically *Abhyanga* also acts on vitiated *Vata Dosha*, also it nourishes the *Dhatu* of the body (10).

## Swedana

Swedana gives relief from stiffness, heaviness and coldness (11) of body parts and all these symptoms were present in this patient. Generally, Swedana Karma after Senhana Karma is indicated in all kinds of Niramaja Vata roga (12). By the application of Snehana followed by Swedana therapy, the dry stick becomes soft and becomes easy to bend (13), in the same way these Snehana and Swedana Karma gives maximum benefits in conditions like severe spasticity, pain and stiffness, which are commonly present in Pakshaghata cases.

## Patra Pinda Sweda

Leaves of Nirgundi, Ernda, and Arka plants have analgesic and anti-inflammatory properties which are the important ingredient of the procedure. Patra pottali Sweda helps in relieving pain, stiffness and swelling, pacifies the morbidity of Vata, Pitta and Kapha in the affected joints, muscles and soft tissues. In pain related arthropathies before Shodhana like Virechan. Patra Pinda Sweda is effective. When the leaves are fried in the oil the Kleda of leaves goes away (15).

## Udvartana

Udvartana with Yava + Triphala Churna was selected, as the Udvartana is indicated in Vataja and Kaphaja disorders, it does 'Kaphavilayana' and 'Srotoshodhana' also helps to dissolve the vitiated Meda Dhatu and promotes Agni. The Udvartana is generally administered in Gauravata (heaviness of body), Shula (pain all over body) and Aamaja conditions. The Yava Churna is having properties like Kashaya rasa, Ruksha Guna and Lekhana Karma (16). The Triphala Churna is having properties like Kashaya rasa, Ruksha guna and Tridosha Shamaka, Twachya, Medohara and Deepaniya (17). Hence these both drugs are selected for Udvartana during initial course (1st phase) of treatment.

## Shirodhara with Jatamansi tail

Shirodhara is an ayurvedic method of healing, which helps in relaxing mind, body and soul to a harmonious level. According to Ayurveda, Shirodhara is the ultimate remedy of pacifying the vitiated Vata doshas. The herbal oils used in this treatment balances the nature of the Vata dosha and hence provides relief from the various underlying symptoms of the Vata imbalance (18).

## Jatamansi oil

Jatamansi, also known as "tapaswani" in Ayurveda. It also acts as a brain tonic and helps to improve memory and brain functions by preventing cell damage due to its antioxidant property. It also calms down the brain and manages anxiety as well as insomnia. Jatamansi also helps manage the symptoms of anxiety. According to Ayurveda, Vata governs all the movement and actions of the body and nervous system

respectively. Shirashool is mainly due to Vata imbalance. Jatamansi helps reduce shirashool. This is due to its property of Tridosha balancing and a unique Medhya (improve intelligence) effect (19).

## Shodhanartha Snehapana

Shodhanartha Snehapana has three fundamental purposes before Shodhana (purification) processes as follows –

- To prepare the body by bringing the Doshas from Shakha to the Koshtha from where they can be easily expelled out (20).
- To pacify the anticipated provocation of Vata after the purification processes (21).
- For providing strength to the body for bearing the stress of the purification processes (22).

## Virechana karma

Virechana (purgation) described in ayurveda as important aspect of detoxification. Virechana is choice of Sodhana Chikitsa for pitta dushita vyadhi; This study proves efficacy of Virechana in the management of Pakshaghata. The therapy alleviates Vata and purifies the body by removing toxins (23, 24).

There is the involvement of Suddha vata prakopa, Anyadosha Samsirsa vata prakopa and dhatukshayajanya vata prakopa in Pakshaghata. As per modern medical science any stroke or shock associated with ischemia and hemorrhage resulting destruction of brain tissue and disturbed blood supply (25-28). Thus, with the help of Virechana Karma vitiated doshas can be expelled out from the body which helps in maintain the equilibrium if the body and reduce the symptoms of the disease.

## Nirgundi tail

Nirgundi leaves are used in Ayurveda for **inflammatory swelling of joints, in rheumatism**. It has **vishaghna (antitoxic), and analgesic** action. It is one of the important herbs used in treatment **Vata diseases**.

A water extract of the leaves, when administered to rats, exhibited anti-inflammatory, analgesic, antihistaminic and membrane stabilizing and antioxidant activities (29). Thus, nirgundi oil having vatahara properties helps to pacify vata and other vata related symptoms.

## Pathyadi kashya

Pathyadi kashya is an herbal decoction which consist of hareetaki (*Terminalia chebula Retz.*) and other medicinal herb like vibhitaki (*Terminalia bellerica Roxb.*), amalaki (*Emblia officinalis Gaertn.*), bhunimba (*Andrographis paniculata*), nimba (*Azadirachta indica*), nisha (*Curcuma longa*) along with guda (sugar cane jaggery) etc. Pathyadi kashya is having ushna veerya (hot potency), tridoshahara mainly kaphapitta shamaka and having properties of sheershashulahara (headache alleviating), mala anulomaka (stool formation and facilitated evacuation) and chakshushya (comfort the eye). In the guna paata (verse responsible for clinical applications) of the

*kashaya* mentioned that the *kashaya* has a specific efficacy in *shiro roga* (head diseases) (30).

### Guggulu Tikta Ghrita

*Guggulu tiktaka ghritam* contains Tikta rasa *pradhana dravyas*. Tikta rasa is *Pachana (tikta dravya are laghu and ushna tikshan* in properties which are very useful for *Ama pachna*) hence it alleviates *Ama* (toxic substances) the increased digestive fire helps in maintaining the normal stage of *Dhatwagn*, so that the body tissues will be in equilibrium state. *Tikta rasa* helps in formation of *Samyak Asthi dathu*. (31).

### Trivrut avleha

*Trivrut* which is most commonly known as *Operculina turpethum* Linn. The bark of the fresh root is rubbed up with milk and administered as purgative (32). *Aruna* or *Shweta* (i.e., having whitish or reddish coloured root) & *Shyama* (i.e., having blackish root) are the two varieties of *Trivrit*. Botanical name of *Aruna* or *Shweta Trivrit* is *Operculina turpethum* (L.) Silva Manso (syn. *Ipomoea turpethum*), while that of *Shyama* is *Ipomoea petaloides* chois (33).

Cardiotonic substance named oleandrin is an active principle of the leaves. The roots, bark and seeds contain cardio-active glycosides, formerly designated as *neriodorin*, *neriodorein* and *karabin* (34).

### Aampachaka Vati

*Aam Pachak Vati* helps in reducing aggravated *Tridoshas (Vata, Pitta & Kapha)* and helps digestion by increasing peristaltic movement. This special formulation helps in quickly controlling acidity, flatulence and indigestion is a good remedy for digestive disorders.

### Tapyadi loha

*Tapyadi Loha* is also used in *Pandu* and *Visha*. *Rasaushadhi* have *Rakta Prasadana* and *Rasayana* qualities. *Triphala* having *Deepana Pachana* qualities whereas *Chitrak*, *Shunthi*, *Marich*, *Pippali* and *Vidanga* are *Ushna Virya*. Besides *Svarna Makshika* and *Rajat Bhasma* show *Vishahara* properties. Hence, this was the apt choice as the Trial Drug or *Vyadhi Viparit Dravya* (35).

### Cap Palsineuron

It is a proprietary medicine prepared by combination of *Ekangaveera Ras*, *Mahavatavidhvamsa Ras*, *Sameer Pannag Ras* and *Sutasekhara Ras*, and all these *Yogas* are directly indicated in *Vataja Roga* (36). Due to this specific type of combination, it was administered to patient to tackle symptoms like weakness and stiffness in the muscle.

### Sutshekhhar rasa

*Sutshekhhar rasahelps* in improving the vitiated state of *pitta* and improves the whole digestion and results in proper functioning of *Agni*. Its substances are having *ruksha*, *laghu*, *katu* and *ushna* properties that decrease the vitiated *drava roopa* of *pitta* (37).

### Phalatrikadi Kashaya

*Phalatrikadi kashya* consists of *Amalaki*, *Hareetaki*, *Vibhataki*, *Amrita*, *Vasa*, *Katuki*, *Kiratikta*, *Nimba*. *Phalatrikadi* is a most common and famous preparation having properties such as *Pittarechak*, *Yakriduttejak*, *Deepan*, *Rechan*, *Pachak*, *Shothhara*, *Jwarahara*, *Kamala* and *Panduhara*, *Yakrit* and *Raktvikarhara*, *Tridoshara*, *Rashayan*, *Mutrajanana*, *Pittasarak*, *Anulomak*, *Shwedak*, *Dahaprashaman* and *Raktapittahara* (38)

### Physiotherapy

Physiotherapy is one of the best supportive therapy for the diseases like *Hemiplegia*. It is very useful for rehabilitation. The main aim of physiotherapy is to treat, correct, prevent and to prepare the patient to adjust with their disabilities and deformities happened (39). In all kinds of *Pakshaghata*, the physiotherapy is given for the better movements of limbs, fingers and toes.

### Conclusion

Simple *Panchakarma* treatments are beneficial in conditions like *hemiplegia* in acute stages. *Pakshaghata* is a very difficult disease to manage, because complications may arise at any time. But by adopting a proper logical treatment protocol, one can get good results in *Pakshaghata*. *Panchakarma* helps muscle restoration and boost motor system and; thus, overall relief in impairment occurs in patient of *Pakshaghata*. The present case study is a practical evidence for the importance of in *balvan* patient of *hemiplegia*. The success of this case helped to gain trust of the patients towards *Ayurveda* and *Panchakarma* treatments.

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