

## Case Study

# Importance of *Rookshana Karma* (dehydrating therapy) in the management of transverse myelitis

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## Abstract

In *Charak Samhita*, all the treatment modalities have been classified broadly into six types, i.e., *Langhana* (depleting therapy), *Brimhana* (nourishing therapy), *Rookshana* (dehydrating therapy), *Snehana* (oleation therapy), *Swedana* (sudation therapy) and *Stambhana* (astringent therapy). Out of these six types, *Rookshana* is of the same importance as others but is used less frequently as main line of treatment. Since decades, Ayurveda treatment is considered most promising treatment for neurological disorders. Most of the neurological disorders are generally considered to be *Vata Vyadhis* in which *Snehana Karma* is recommended. In case of neurological disorders if symptoms are suggestive of *Kapha* dominance, then *Rookshana* must be done initially. Transverse myelitis is a neurological disease, which has an autoimmune process involved in its pathology. It is an acute, subacute, generally monophasic inflammatory disease of the spinal cord. In the present case of transverse myelitis, the patient was found having *Kapha* dominant symptoms such as coldness of feet, loss of appetite etc., and so the patient was subjected to *Rookshana Karma* in various forms. Just after 15 days, all these symptoms were subsided and tremendous improvement was found thereafter. The paraplegic patient under study was able to walk independently in just two and half months of treatment. All other typical features related to the disease were also improved. This particular case has proved the importance of *Rookshana* therapy in neurological disorders.

**Key words:** Ayurveda, *Rookshana Karma*, transverse myelitis, *Urustambha*

## Introduction

Transverse myelitis is a neurological disease, which has an autoimmune process involved in its pathology.<sup>[1]</sup> In autoimmune diseases, the immune system, which normally protects the body from foreign organisms, mistakenly attacks the body's own tissue, causing inflammation and, in some cases, damage to myelin within the spinal cord. It is a neurological disorder caused by inflammation across both sides of one level, or segment, of the spinal cord. The term myelitis refers to inflammation of the spinal cord; transverse simply describes the position of the inflammation, that is, across the width of the spinal cord.<sup>[2]</sup> Attacks of inflammation can damage or destroy myelin, the fatty insulating substance that covers nerve cell fibers. This damage causes nervous system scars that interrupt communications between the nerves in the spinal cord and the

rest of the body. Recovery from transverse myelitis usually begins within 2-12 weeks of the onset of symptoms and may continue for up to 2 years. However, if there is no improvement within the first 3-6 months, significant recovery is unlikely.<sup>[2]</sup>

## Case Report

An 18-year-old male patient having indwelling catheter *in situ* reported with the complaint of inability to move his legs and no sensation below his navel [Figure 1]. He also told that his legs seemed to be cold. He was having loss of appetite. He could not hold the urge of defecation.

On asking about the history of the same, he stated that he was alright till evening of 8 April 2010 and then he felt feverish and developed pain all over the body. He took some medicine for the same from his family doctor. He woke up late in the morning and was unable to stand up by himself. He stood with support and tried to walk. During the walk, he felt that his legs were not in his full control. He had not voided any urine since morning. In the evening, along with his relatives, he again consulted the other doctor who then referred him to higher center.

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**Figure 1: Before treatment-indwelling catheter**

He got admitted to the hospital on the next day with the complaint of no sensation in lower half of the body as well as insensitivity to touch from lower part of neck to toe. He was also having the feeling of tightness around the abdomen.

Lumbar puncture was done on the same day, which showed increased polymorphs. On 15 April 2010, CT-head was done and it was normal. He also faced some respiratory problems and so was on intermittent oxygen inhalation therapy from 12 to 18 April 2010. On 17 April 2010, MRI cervico-dorsal spine with MRI brain was done, findings of which were as follows.

*Long segment T2 hyper intensity of the cervicodorsal spinal cord from the C3 level onward. Suggestive of myelitis.*

Therefore, the present case had been diagnosed as that of transverse myelitis and came to us after two months of acute attack. At that time, he was having total paraplegia, no sensation below umbilicus, and other typical features of transverse myelitis such as bladder–bowel dysfunction, feeling of tightness around abdomen, and a bed sore on the sacral region.

Some of the above-mentioned presentations of the patient resembled the sign and symptoms of a disease named as *Urustambha* (spasticity of thighs) in Ayurvedic classics.<sup>[3]</sup> On having a critical view, some of the features of transverse myelitis and *Urustambha* are found very close to each other and can be correlated<sup>[2,4-10]</sup> [Table 1]. On the other hand, many other

features of transverse myelitis and *Urustambha* are also there that cannot be correlated<sup>[2,4,5,8]</sup> [Table 2].

## Treatment and Results

This known case of transverse myelitis, when reported to us was having some signs and symptoms like that of *Urustambha*, as well as other due to dominance of *Kapha*. Therefore, as per *Charaka Samhita*, *Rookshana Karma* (dehydrating therapy) was selected as choice of treatment.<sup>[11]</sup> In accordance with the line of treatment of *Urustambha*, *Kshapana* and *Shoshana* (complete extraction and absorption of liquid fraction) were desired so the patient was treated as follows.<sup>[12]</sup>

The treatment was started with a special type of the fomentation procedure known as *Baluka Sweda* which is a *Rooksha* (dry) type of *Swedana*. It is used in the dominance of *Kapha* and *Aama* (undigested metabolites) in the body. In this type of fomentation, prior massage of oil was not done. This procedure includes the application of heated bolus (poultice) of sand on the body part where fomentation is required. This type of fomentation quickly reduces the *Kapha* and digests the *Aama*. After 3 days of this *Baluka Swedana*, the patient reported that he felt warmth in legs and he could sense the variation in the temperature of *Swedana* (fomentation) room and outside the room. This therapeutic test confirmed the *Kapha* dominance and guided us to treat the case in the same line. Therefore, in the next step *Vachadi Yoga* [consisting of equal amounts of self-prepared powders of *Vacha* (*Acorus calamus*), *Devadaru* (*Cedrus deodara*), *Pippali* (*Piper longum*), *Gajapippali* (*Scindapsus officinalis*), *Haritaki* (*Terminalia chebula*), and *Katuki* (*Picrorhiza kurroa*)] in a dose of 3 g twice a day along with honey was started.<sup>[13]</sup> Besides that, *Kaishora*<sup>[14]</sup> *Guggulu* in a dose of two tablets soaked in water and two tablets of *Chandraprabha Vati*<sup>[15]</sup> along with water were started twice a day as oral medicine. All the *Kapha Vardhaka Aahara-Vihara* were restricted and *Yava* (barley) along with *Karvellaka* (bitter gourd) was advised in diet.<sup>[16]</sup>

With above said treatment, the patient started responding well and within 10 days he was able to move all the fingers of the left foot. The treatment was continued as such and on 15<sup>th</sup> day, the patient was able to dorsi-flex his left foot. On 18<sup>th</sup> day, he started to flex his left knee. After 2-3 days, his right foot

**Table 1: Comparable features of transverse myelitis and *Urustambha* (spasticity of thighs)**

Transeverse myelitis	<i>Urustambha</i>
Sudden paraesthesia (burning, coldness, tingling, picking, etc.,)	<i>Daha</i> (burning sensation), <i>Ruk</i> (pain), <i>Sphurana</i> (twitchings), <i>Bheda</i> (breaking pain), <i>Toda</i> (pricking pain), <i>Lomaharsha</i> (horripilations)
Sensory loss	<i>Supti</i> (numbness), <i>Avidheya Parispandana</i> (involuntary spasm)
Paraparesis	<i>Stabdha</i> , <i>Avachetana</i> , <i>Kricchodharan</i> (difficulty in lifting the limb), <i>Alpavikrama</i> (immobility), <i>Gaurav</i> (heaviness), <i>Jangha-Urvo Sadan</i> (asthenia of thighs and calf region), <i>Padasadan</i> (asthenia of legs)
Paraplegia	<i>Sansthane. Padau cha manyate</i> (lack of control over legs)
Muscle spasm	<i>Angamarda</i> ( malaise)
General feeling of discomfort	<i>Staimitya</i> (indolence), <i>Aayaas</i> (fatigue)
Fever	<i>Jwara</i> (fever) (as <i>Poorvarupa</i> )
Loss of appetite	<i>Aruchi</i> (anorexia), <i>Arochaka</i> (anorexia)
Allodynia	<i>Bheda</i> (breaking pain), <i>Toda</i> (pricking pain), and <i>Sphurana</i> (twitching pain)

**Table 2: Non-comparable features of transverse myelitis and *Urustambha* (spasticity of thighs)**

Transverse myelitis	Urustambha
Low back pain	<i>Dhyan</i> (fixed gaze)
Bladder and bowel dysfunction	<i>Kampana</i> (tremors)
Respiratory problems (subjected to the site of lesion)	<i>Sankocha</i> (contractures)
Headache	<i>Chhardi</i> (vomiting)
Experience of heightened sensitivity to change in temperature or to extreme heat or cold	<i>Nidra</i> (sleep)
	<i>Tandra</i> (drowsiness)

**Figure 2: During treatment—patient can raise his hip****Figure 4: After treatment—patient can walk smoothly**

also started moving. On 34<sup>th</sup> day from date of admission, the patient successfully raised his hip on his feet in lying position [Figure 2]. So, he was advised some exercises of knee and hip by the physiotherapist. In next 4-5 days, the patient was told to stand on his feet and clonus was observed in both legs. So, *Abhyanga* (massage) with *Saindhavadya Taila* and *Nadi Swedana* (fomentation with steam) were given<sup>[17]</sup> [Table 3]. This particular oil was prepared with a classical method for *Taila Paka* (processing of oil).<sup>[18]</sup> It was used for massage as

**Table 3: Ingredients of *Saindhavadya Taila***

<i>Saindhava</i>	(Rock salt)
Seeds of <i>Bhallataka</i>	( <i>Semecarpus anacardium</i> )
<i>Shunthi</i>	( <i>Zingiber officinale</i> )
<i>Aranala</i>	(Sour vinegar)
<i>Granthika</i>	(Root of <i>Piper longum</i> )
Sesame oil	( <i>Sesamum indicum</i> )
<i>Chitraka</i>	( <i>Plumbago zeylanca</i> )
Water	—

**Figure 3: During treatment—patient (rt.) can walk with support**

its ingredients are mainly *Ushna Veerya* (hot in nature) that would have alleviated *Vayu* without increasing *Kapha* or *Aama*. Clonus was subsided and the patient was able to stand with support on 42<sup>nd</sup> day [Figure 3]. Then, he was again referred to physiotherapist who started the gait training and the patient started walking with the help of stick just within 2 months of treatment. Initially, there was spasticity in his thighs which got reduced by physiotherapy and in next 15 days, the patient could walk almost normally [Figure 4].

A follow-up MRI was done which reported as follows.

- Visualized spinal cord is normal in caliber and signal intensity.
- As compared to the previous study dated 17-4-2010, there is complete resolution of intramedullary T2/STIR hyper intensity of cervico-dorsal spinal cord.

## Conclusion

On the basis of above study, it can be concluded that if the patient with transverse myelitis shows the sign and symptoms like that of *Urustambha* along with dominance of *Kapha* then the choice of treatment must be *Rookshana Karma* which must be followed till *Kapha* is decreased. After that, the treatment must be planned as per the situation arises.<sup>[19]</sup> By managing a single case, the authors cannot arrive to the conclusion that *Rookhsana Karma* (dehydrating therapy) is the ultimate treatment in transverse myelitis. The study should be carried out in several similar cases.

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## हिन्दी सारांश

### Transverse myelitis की चिकित्सा में रूक्षण कर्म की महत्ता-एक अध्ययन

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चरक संहिता में सभी चिकित्सा कर्मों को षड् उपक्रम के अन्तर्गत समाहित किया गया है। उनमें से रूक्षण कर्म भी समान रूप से उपयोगी है, लेकिन प्रायः उसका उपयोग कम किया जाता है। सामान्यतः तन्त्रिका गत व्याधियों की चिकित्सा के रूप में स्नेहन चिकित्सा का प्रयोग किया जाता है, किन्तु यदि कफ प्रधान लक्षण हों तो प्रारम्भ में रूक्षण चिकित्सा करनी चाहिये। प्रस्तुत Case Study में रोगी Transverse myelitis से ग्रसित था जिसमें कफ प्रधान लक्षणों की प्रधानता थी। अतः रोगी का विभिन्न विधियों के द्वारा रूक्षण कराया गया तथा रोगी २.५ महीने में स्वयं चलने लगा। यह अध्ययन तन्त्रिका तन्त्र गत व्याधि में रूक्षण की महत्ता को प्रदर्शित करता है।