



# EFFICACY OF TRADITIONAL TREATMENT (PANCHKARMA) IN THE MANAGEMENT OF KATIGATA VATA (LUMBER PAIN) BY UNPACKING BLACK BOX DESIGN

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## Abstract:

**Objectives:** Unpacking Black Box design allows the effectiveness of traditional medicine to be determined either within its own theoretical framework or within that of conventional medicine. This study is performed to evaluate the role of traditional treatment of Panchkarma in Katigata Vata (Lumber pain).

**Methods:** A 58-year-old male suffering from lower back pain, painful lumber movement, stiffness in the lumber region and tingling numbness for 6 months was treated with this Black Box package consisting of oleation therapy (*Snehana*), sudation therapy (*Swedana*), therapeutic enema (*Basti*) and palliative treatment (*Shamana Chikitsa*). The response to the treatment was recorded and therapeutic effects were evaluated through symptomatic relief.

**Result:** Clinical assessment was done both pre and post-therapy by using the VAS scale. The patient got marked improvement in lower back pain (80%), stiffness (75%), and tingling numbness (75%). The patient got moderate relief in painful lumber movement i.e.71%.

**Conclusion:** Unpacking Black Box approaches guide how to apply methodical thinking and problem-solving techniques to improve the application of Panchkarma procedures.

**Keywords:** Black Box design, Katigatavata, Panchkarma, Lumber pain

**Introduction:** As per the WHO guidelines, the study of traditional medicine can also be undertaken in a 'Black Box' manner. This means that the treatment and all of its components are delivered as they would be in the clinical situation. In this type of study, no components of the treatment 'packages' are isolated and studied independently. This allows the effectiveness of traditional medicine to be determined either within its own theoretical framework or within that conventional medicine<sup>1</sup>.

Katigatvata is one of the Vatvyadhi mentioned by Acharya Charaka<sup>2</sup>. All Vatvyadhi are predominantly of Vata origin and Vata Dosha is responsible for Shool (Pain), and Chimchimayan (Tingling Numbness). Lower back pain, painful lumber movement, stiffness in the lumbar region, and tingling numbness is the cardinal sign of Katigat Vata. Some ancient text also describes conditions resembling Katigat Vata i.e. Katigraha or Trik Graha (lumber stiffness), Kati Vayu or Kati shool (Lumbar pain)<sup>3</sup>.

In Ayurveda, Panchkarma treatment is the paramount treatment for Katigata Vata<sup>4</sup>. Panchakarma procedures including Snehana (external oleation), Swedana (sudation), Basti (therapeutic enema) along with Shamana Chikitsa (palliative treatment) are useful as an alternative treatment for lower back pain in the current scenario. Thus, considering these principles, a Black Box containing Snehana, swedana, Basti, and Shamana Chikitsa as a Panchakarma modality is used for the present study.

### Case Report

A 58 yrs old male from the OPD of the Panchkarma Department at M. D. Ayurvedic College, Agra, seeking treatment for lower back pain, was selected for the present study and admitted to the ward. The patient had a history of progressively increasing pain in the lower back, painful lumber movement, stiffness in the lumber region and tingling numbness for 6 months. The patient had no history of trauma.

On physical examination, the general condition of the patient appeared to be healthy. The straight leg raising (SLR) test was negative in both legs. Motor and sensory functions along with deep and superficial reflexes were normal. His blood pressure was 130/70 mm of Hg and his pulse 80 /minute. No pallor and oedema were present. All details of the patient including history, past history, and treatment history were taken. The patient was kept on the normal diet without any specific restrictions and was advised not to lift any weights.

The patient was treated with one package of Panchkarma therapy (Table 1), In that Pachana chikitsa given for first 2 days with lukewarm water. Thereafter shodhan and shaman chikitsa was given as follows- Shodhan chikitsa: Basti given for 7 days in that Matra Basti given on 1st and 7th days. Guduchisiddha Basti given on day 2 to day 5. Shaman chikitsa given parallel with shodhan chikitsa Ashwagadha churna 3 gm and Cap Panchtiktaghrit Guggul twice daily after meal for 15 days. Assessment was done after 15 days

<b>Table 1: Black Box:</b>			
<b>Pachana Chikitsa: (Digestive treatment)</b>			
<b>Kalpa</b>	<b>Dosage</b>	<b>Kala</b>	<b>Anupana</b>
Musta Churna	250 mg	Twice a day before food	Luke warm water
<b>Shamana Chikitsa:</b>			
<b>Kalpa</b>	<b>Dosage</b>	<b>Kala</b>	<b>Anupana</b>
Aswagandha Churna	3 gm	Twice a day After food	Luke warm water/ milk
Cap Panchtiktaghrit Guggul	1	Twice a day After food	Luke warm water
<b>Shodhana Chikitsa:</b>			
<b>Therapy</b>	<b>Drugs</b>	<b>Duration of Therapy</b>	<b>Period of therapy</b>

Sthanik Snehana	Balaguduchyadi Tail	15 min	07 days
Sthanik Pinda Swed	Kukutand pind	15 min	07 days
Anuvasana Basti	Balaguduchyadi Tail	5 min	Day 1 <sup>st</sup> and Day 7 <sup>th</sup> after meal
Niruha Basti	Guduchisiddha ksheer	10 min	Day 2 <sup>nd</sup> to Day 5 <sup>th</sup> after meal

**Methods of preparation of Guduchisiddha ksheer Basti (Therapeutic enema):** 30 gm guduchi (*Tinospora cordifolia*) kwath churna was taken and mixed with 150 ml ksheer (milk) and 300 ml water. The mixture is boiled till it is reduced to 150 ml. Once ready, it was filtered and kept aside. 40 gm of Madhu (honey) and 5 gm of Saindhav (Rock salt) were taken in another container and stirred well to make a homogenous mixture. 20 ml of sesame oil and 20 ml of Goghрут (ghee) were added to the mixture and stirred well to make a homogenous mixture. 150 ml of prepared kashaya (decoction) was finally added to this mixture with continuous stirring to make a homogenous mixture. The mixture is reheated by using hot water bath before administration.

**Methods of preparation of Kukutanda Pinda (Bolus of Hen's eggs) :** four eggs of hen (kukkutand) are cracked and bulk is collected in a container. 10 ml Goghрут is boiled in a hot pan and egg bulk is added and 5 gm rock salt is stirred in it. The mixture is then collected in a porous cotton cloth and it is tied as package/parcel (Pind/ pottali). Kukkutand pind is ready.

### Observation and Results:

The improvement in the patient was assessed on the basis of relief in signs and symptoms of the disease. The result of therapy was evaluated on the basis of improvement in subjective parameters by using the VAS scale<sup>5</sup>. The total effect of therapy was assessed taking into consideration the overall improvement in signs and symptoms and calculated by the formula:

$$\text{Effect of therapy} = \frac{\text{Before treatment (BT)} - \text{After treatment (AT)} * 100}{\text{Before treatment}}$$

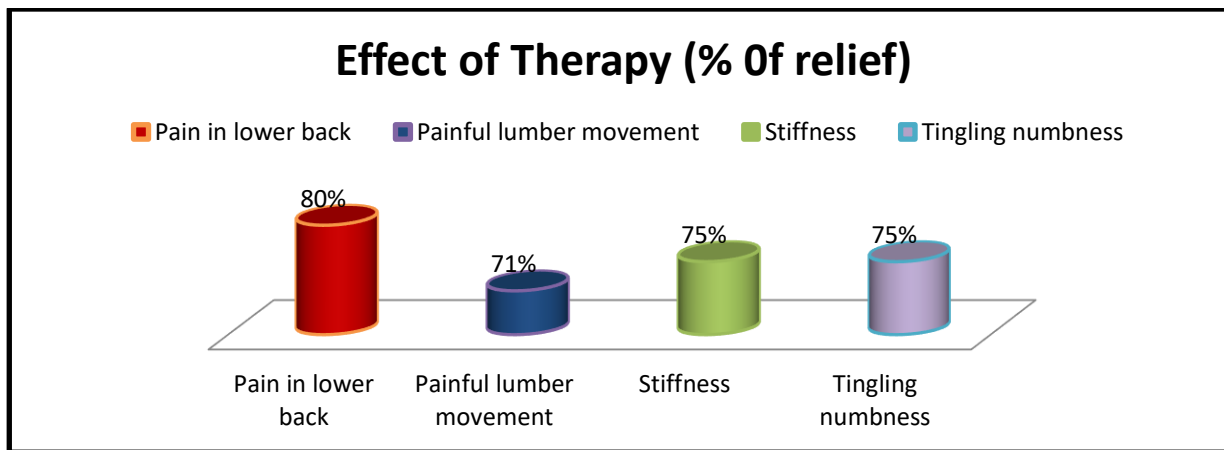
The obtained results were classified as:

1. Marked improvement: 75% - 100% relief
2. Moderate improvement: 50 to 74 % relief in sign and symptoms
3. Mild improvement: 25 to 49 % relief in sign and symptoms
4. No improvement: < 25 % relief in sign and symptoms

**Table 2: Evaluation of clinical signs and symptoms**

Sign and symptoms	Before treatment (VAS score)	After treatment (VAS score)	Effect of Therapy (% Of relief)
Pain in the lower back	10	02	80%
Painful lumber movement	07	02	71%
Stiffness	08	02	75%
Tingling numbness	08	02	75%

The above table shows that patient got marked improvement in Lower back pain (80%), stiffness (75%) and tingling numbness (75%). The patient got moderate relief in painful lumber movement i.e.71%. (Graph- 1)



### Discussion:

Panchkarma treatment in Ayurveda uses many times packages of treatment to cure diseases. In these packages, different types of treatments are carried out. These packages can be considered as Black Box for future treatment purposes. The Black Box can be unpacked through the description of the improvement intervention. Detailed information helps evaluators identify what elements of quality improvement interventions are generalizable, versus those specific to the context.

In this study, we attempted to unpack the Black Box for understanding the relationship between improvement intervention and context (Katigata Vata). The following packages are used for treating the Katigata Vata.

**Pachana Chikitsa (digestive Treatment):** Ama (Metabolic waste material) or Agnimandya is the root cause of all diseases. Pachana (Digestive therapy) promotes Agni (bio-fire), it exhausts Ama (morbid dosha) and body make ready for samyak panchkarma procedure. Pachana karma plays an important role as Purvakarma (preoperative) of Shodhana procedures for biopurification procedure and its crucial for the body to achieve the complete benefits of therapies. Musta (Cyperus Rotundus) powder is used for Pachana Therapy.

**Shamana Chikitsa (Pacification Treatment):**

**Aswagandha Churna:** Aswagandha is an analgesic that soothes the nervous system from pain response<sup>6</sup>. The powerful anti-arthritis properties of Aswagandha are widely accepted and documented<sup>7</sup>.

**Cap Panchtiktaghrit Guggul<sup>8</sup>:** This is a unique combination of drugs having Tikta Rasa, Ushna Virya and Madhur Vipaka. The synergistic pharmacological activity of Panchatiktaghrit Guggul increase Dhatvagni (Tissue metabolism) and Poshana (nourishes) of all Dhatus, especially Asthi and Majja which control the degeneration process that strengthens the Lumber joint and improvement in Katigata Vata.

**Shodhana Chikitsa (Biopurification):**

**Sthanik Snehana (Local Oleation):** It prevents and corrects the aging process and nourishes the Dhatu and increases their strength with Vatahara properties<sup>9</sup>. Balaguduchyadi tail has mixed properties viz. Tikta Madhur Rasa and Snigdha (unctuousness) hence useful in Vatashaman, nourish Majja and Asthi. Local oleation gives strength to the muscle, relax the stiff muscles and increases local blood flow and metabolism.

**Sthanik Pinda Swed (Local sudation):** After sthanik snehana, Kukutand Pind sweda was done locally. Kukutand Pind sweda nourishes the Asthi (bone) and majja (bone marrow) owing to Madhur Rasa, Snigdha Guna and Vatanuloman (Vata pacifying effects)- Stambhanashana (Stiffness) Shoolshamana (Pain reliever) by Ushna Virya. Administration of Swedan may produce a hypoanalgesic effect by diverted stimuli.

**Basti:** In Ayurveda, therapeutic enema (Basti) is considered as Ardha chikitsa (half of the treatment) and is a therapy of choice for Vatvyadhi<sup>10</sup>. Guduchisiddha ksheer Basti has Asthi Gamitva (Catalyst), Bruhana (Nourishing), Dhatavagni vriddhi (Increases Tissue metabolism) and Vatanuloman Vatashamana (Vata pacifying effects) properties which are useful to nourish Ashti and Majja Dhatu. Ushna Virya removes stiffness. Basti normalizes Apana Vayu which is the main culprit of Katigatavata. In Guduchisiddha ksheer Basti Guduchi (*tinospora cardifolia*) is the main ingredient. The study about *Tinospora cardifolia* on Rats shows effect on Arthritis induced model and elaborated the immune mechanism underlying the effect. Study shows suppressed Arthritis inflammation and bone, cartilage damage<sup>11</sup>.

As per Ayurveda, Shoola (Pain) occurs due to the vitiation of Vata Dosha. Vata Dosha is vitiated by Strotas Avrodha (obstruction of channels) and Dhatu kshaya (depletion of tissue). So the treatment aims to propitiate vitiated Vata Dosha. the present Black Box design contained drugs and therapies that have the properties of enhancing nutrition, promoting strength and helping in improving the qualities of Asthi Dhatu and the reformation of wasting tissue. The patient exhibited significant symptomatic relief with this package of treatment.

**Conclusion:** Unpacking Black Box approaches to guide how to apply systematic thinking and problem-solving techniques to improve Panchkarma process and a wide range of issues like Prakriti (Nature), Vitiation of Dosha, Koshta (bowel), Kala (Time), etc. that interfere result of treatment.

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