



## Scientific Interpretation of *Vaman*

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### Abstract

*Vaman* is *sanshodahan chikitsa* (biopurification treatment) in which vitiated *doshas* (toxins) are eliminated from body through *kaphamoola sthan*. It is useful in healthy as well as ailing persons. It is neglected due to fear of complication. The present paper endeavor to interpretation of *Vaman karma* (procedure) in a scientific way which helps the physician to propagate *vaman* as treatment on a large scale for respiratory disorders, skin disorders, obesity, prediabetic and much more.

### Keywords

*Vaman, Kaphamoola Sthan, Vaman Karmukta, Vaman*



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## INTRODUCTION

*Ayurveda* is well known to entire world because of its unique method of treatment. (Government of Russia has given legal recognition to profession of Doctor of *Ayurveda* medicine).

A striking feature of *sanshodhan chikitsa* is brought to notice by *Acharya Charak*. He has mentioned that *Vaman* is *Apunarbhavata*<sup>1</sup> *chikitsa* (means non recurrence of disease). *Vaman* is one of the five *pradhan karmas* of the *Panchkarma* used to treat *Kaphaj* disorders<sup>2</sup>. *Vaman* eliminates the vitiated *kapha dosha* from our body likewise in modern medical science stomach wash is used to eliminate toxins in some cases of poisoning. This may be comparable to *vaman* mentioned in *ayurvedic* texts. The success of this or any therapeutic procedure depends upon the proper administration of *karma*<sup>3</sup> (procedure). The administration of *Vaman* followed by appropriate principles as stated by *Acharyas* will help to minimize the pre and post procedural complications very effectively. This scientific interpretation also provides anatomical, physiological and pharmacological evidences to prove the principle postulated by *Charak*.

## AIM

Critical study of the *vaman karma* and its *karmukta* (mechanism of action) in relation with modern medical science

## OBJECTIVES

1. To consider *vaman karma* in terms of modern medical sciences.
2. To recognize *vaman* as a safe treatment.
3. To determine the biochemical changes before and after *vaman karma*.

## MATERIALS AND METHODS

1. A detailed literary review of *VAMAN* and *EMESIS* mentioned in all classics of *Ayurveda* and modern sciences. References are logically analyzed.
2. Scientific studies carried out in the recent past by some research scholars.

## REVIEW OF LITERATURE

*Vaman* is carried out in three steps –*poorva karma* (pre-procedure), *pradhankarma* (chief procedure) and *paschat karma* (post procedure).

### 1. POORVA KARMA

*Snehapan* (internal oleation) should be done for 3 to 7 days. Even if the lipid level



increases during snehapan it is transient and comes to normal after *samyak shodhan*<sup>4</sup>. *Swedan* (steam) and *kaphotkleshkar ahar* (for utkleshhan of dosha) for example Dadhi (curd), *maans* (meat) is given to the patient on previous day of *vaman*. It fascinates vitiated *doshas* to collect in *koshtas* (stomach), so that it can be removed by *vaman karma*. If these *doshas* remain in imbalanced state in body they can causes various diseases.

## 2. PRADHAN KARM (CHIEF PROCEDURE) OF VAMAN

After bath patient is made to sit on a *janusam aasan*<sup>5</sup> (chair of knee height). Now *dravdravya* for example milk, *ikshuras* (sugarcane juice) is given to the patient for *aakanthpaan* (till he feels full upto his throat). This will cause distension of stomach and oesophagus which in turn stimulates vagus nerve. Vagus nerve stimulates vomiting centre and emesis occurs. Before administering the *vaman aoushdhi*, *vaidya* should enchant the verses mentioned in the *siddhi sthan*. Now wait for one *muhurta* (nearly 48 min) for Vegas (actual event of vomiting). *Vaman aoushdhi* has following *gunas*<sup>6</sup> (properties).

- *Asatmya* (unsuitable )
- *Beebhatsa* (aversive)

- *Durgandha* (unpleasant smell)
- *Durdarshana* (ugly looking)

Cerebral cortex has vomiting centre which is stimulated by psychic stimuli such as nauseatic odor, sight or noise<sup>7</sup>. Due to *beebhatsa* and *durdarshana guna* visual sensory impulse goes to vomiting centre and vomiting reflex occurs.

It has following *gunas* (properties)

- *Ushna – swedane ushna*<sup>8</sup>
- *Tikshna – shodhane tikshna*<sup>8</sup>
- *Sukshma – vivrane sukshma*<sup>8</sup>
- *Vyavayi* – spread all over the body without being digested<sup>9</sup>
- *Vikasi – sandhibandh shaithilya*<sup>9</sup>

## 3. PASCHAT KARMA (POST PROCEDURE)

- After *samyak prayog*, clean the limbs and face
- Rest for one *muhurta kal*
- Suitable *dhumapan*
- *Tambul sevana*
- *Nivatgrihe shayan*
- *snehokta acharvidhi*
- *Sansarjan karma*

## SAMYAK YOGA

*Doshas* are eliminated in sequence firstly *kapha* then *pitta* and lastly *vata* (anil). *Pittante vaman* is considered *shreshhta*



(proper). *Hridaya shuddhi*, *Murdha shuddhi*, *laghutva* are achieved.

## DISCUSSION AND SCIENTIFIC INTERPRETATION

*Hridaya* have two meanings<sup>10</sup> viz., Heart and Brain. Here *hridaya* may be heart or brain because both are able to carry *dravya* all over the body in a short duration by using their circulatory or nervous system, respectively. *Ooushdi* have above mentioned *gunas* towards *Hridaya* because of its *swavirya*. Here *Swavirya* may be vascular path (veins) or sensory stimuli by nerve (chemo- receptor and baro- receptors) which are connected to heart and brain, respectively. Now it goes to all *sthoor*(macro) and *sukshma*( micro) *strotas* through various *dhamanis*. Here *dhamanis* may be vascular path (arteries) or motor impulses by nerve. At this place (*srotas*) liquification of *doshas* takes place by virtue of *Aagneya guna* and break down into several particles by *Tikshna guna*. Due to *anupravanbhav* these *doshas* enter into *Aamashaya* (stomach). These *doshas* are stimulated by *Udan vayu* .

*Vaman* aousadhi has *urdhabhag prabhav* due to its *agni* and *vayu mahabhut*

*pradhaanya*. Combined effect of both of the above facts is that *doshas* move towards oral cavity and are finally removed through mouth. Here *urdhvabhag prabhav* can be related to ability of certain drugs that direct induce chemoreceptor trigger zone (CTZ). If *vegas* (urges) do not occur, patient should be guided to use *Erandnal* (small stick of *errand* plant) or fingers to induce *vegas* . It can be correlated with mechanical stimulation of pharynx<sup>11</sup>. It is one of the causes of vomiting which eventually it leads to vomiting reflex. *Vaman karmukta* (mechanism of action) can be best illustrated by flow diagram no.1

According to modern sciences drugs act on

- Vomiting centre of medulla
- Chemo Receptor Trigger zone (CTZ)

### VOMITING REFLEX<sup>12</sup>:

Sensory impulses for vomiting due to irritated or distended part of GI tract. These impulses are transmitted to vomiting center through vagus and sympathetic afferent fibres.

Vomiting center lies bilaterally in medulla oblongata near the nucleus tractus solitaries. Motor impulses from the vomiting center are transmitted through V, VII, IX, XII cranial nerves to the upper part of GI tract and



through spinal nerves to diaphragm and abdominal muscles.

### PRECAUTIONS <sup>13</sup>TO BE TAKEN DURING VAMAN

*Lalatpratigrahe* - support patient's forehead

*Parshwa apgrahane* - support patient's waist

*Nabhi prapidane* - rubbing of umbilical region

*Prushta mardane* - massage over back region in *pratilom gati* (upward direction)

- Support to patient's forehead and waist, prevents damage that may occur due to fall or imbalance during procedure.

- Rubbing of umbilical region and massage over back region facilitates *vegas*. It also relieves pain by stimulating the release of opioid peptides for example enkephalin, dynorphin and endorphin from pituitary which close the gate and block the pain signals. It is based on gate control theory<sup>14</sup> for pain proposed by psychologist Ronald Melzack and anatomist Patric wall.

- In association with ACTH, endorphin is secreted. Under normal condition endorphin is not secreted in enough quantity to have effect on body<sup>15</sup>.

- It means that whenever endorphins are secreted ACTH is also secreted. But ACTH may cause mild increase in B.P

- Patients advised for *vaman* should do exercises which put pressure on abdominal muscles for at least seven days prior to the *vaman karma*. So that post procedural abdominal pain can be minimized.

- Vitals- B.P. must be noted before, during and after *vaman*. Patients with hypertension take special precautions and should not massage back during *vaman*.

- Doctors should keep in mind that there is mild increase in Blood pressure, pulse and sweating during *vaman*.

### OBSERVATIONS

Table no.1 shows observation<sup>16</sup> indicate the stages of *doshas* in *vaman karma*.

- Sweating may be attributed to sympathetic motor action.

**Table 1** Observation<sup>16</sup> indicates the stages of *doshas* in *vaman karma*

Sr. no.	Observation	Stages of Doshas
1.	Sweating	<i>Doshas pravilayan</i> (liquidifies the <i>doshas/toxins</i> )
2.	<i>Lomharshan</i>	<i>Doshas</i> are detached from their site
3.	<i>Kukshi Aadhman</i> (distension of stomach)	Reach to <i>kukshi</i> (stomach)
4.	<i>Hrullas</i> (nausea) and <i>Aasyasravan</i> (salivation)	<i>Urdvamukhi</i> (towards mouth)



When *doshas* reach the stomach, they affect gastric mucosa which stimulates vagal and enteric nervous system. Vagus and enteric nervous plexus carry impulse to vomiting centre and emesis occurs. Nausea is unpleasant sensation which induces the desire of vomiting. It is characterized by secretion of large amount of saliva containing more quantity of mucus. Salivation may be attributed to parasympathetic nervous system. Mild elevation of B.P. (systolic and Diastolic), pulse, temperature and respiration may be attributed to sympathetic stimulation<sup>17</sup>.

#### STRUCTURAL PATHWAY OF VAMAN<sup>18</sup> (EMESIS)

- Anatomically *vaman* is highly integrated and complex reflex involving both autonomic and neural pathway.
- Beginning of antiperistalsis, this runs from ileum towards the mouth through intestine. Velocity of antiperistalsis is about 2 to 3cm/second.
- Deep inspiration followed by temporary cessation of breathing.

- Closure of glottis
- Closure of glottis and cessation of breathing restricts entry vomitus into lung.
- Upper and forward movement of larynx and hyoid bone.
- Elevation of soft palate restricts entry of vomitus into nasopharynx.
- Synchronous contraction of diaphragm, intercostal muscles and abdominal muscles with a characteristic jerk, leads into elevation of intra abdominal pressure.
- Compression of the stomach between diaphragm and abdominal wall resulting into intragastric pressure.
- Relaxation of oesophageal sphincter. Epiglottis is closed and larynx is raised to open the upper oesophageal sphincter.
- Opening of oesophageal sphincter results in emesis.

#### NEUROGENIC PATHWAY OF VAMAN KARMA

Table no.2 shows the action of various nerves on respective organs during emesis.

**Table2** Neurogenic Pathway of *Vaman Karma*

Sr. No.	NERVE	ACTION ON STRUCTURES
1.	VAGUS	Oesophagus, Lower & upper sphincters, Body of stomach, Pyloric antrum
2.	SPINAL NERVES	Respiratory muscles-inspiration, Abdominal Muscles - contraction
3.	PHRENIC NERVE	Diaphragm descends ,Increased intra-abdominal pressure

### VOMITING ACT-PHASES

- In the retching phase, the abdominal muscles undergo a few rounds of coordinated contractions together with the diaphragm and the muscles used in respiratory inspiration. For this reason, an individual may confuse this phase with an episode of violent hiccups. In this retching phase nothing has yet been expelled
- In the expulsive phase, intense pressure is formed in the stomach brought about by enormous shifts in both the diaphragm and the abdomen. These shifts are, in essence, vigorous contractions of these muscles that last for extended

periods of time - much longer than a normal period of muscular contraction.

- The pressure is then suddenly released when the upper oesophageal sphincter relaxes resulting in the expulsion of gastric contents. Individuals who do not regularly exercise their abdominal muscles may experience pain in those muscles for a few days.

### SAMYAK YOGA<sup>19</sup>

*Doshas* are eliminated in sequence firstly kapha then pitta and lastly *vata* (anil). Pittante vaman is considered *shreshtha* (proper). *Hridaya shuddhi*, *Murdha shuddhi*, *laghutva* are achieved.

Acharya describe vaman result into *indriyasamprasad* (All the five sense organ functions properly). *Hridaya* is site of all the *gyanendriyas*<sup>20</sup>. Here *hridaya* may be brain. Only brain can control all the five senses.

*Laghutva* (lightness of the body) is due to removal of *doshas* in imbalance state. *Doshas* (toxins) in case of *vaman* are mostly fatty substances because recent studies revealed that there is decrease in LDL, Triglycerides, serum cholesterol after *vaman*<sup>21</sup>.

## CONCLUSION

According to this study we can conclude that:

1. Vaman vidhi (procedure) and vaman karmukta (mechanism of action) described by Acharya Charak has scientific base in Ayurveda and Modern medical sciences also.
2. Vaman is a safe treatment if we follow guidelines stated by Acharyas and precautions mentioned in this study.



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