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## Analysis of effects of Suppressing natural urges explained in Ayurveda – Causing physiological changes in the human body

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### ABSTRACT

Ayurveda is a science of life that deals with keeping body and mind healthy, by protecting them against diseases and cures illness through its various principles. Certain aspects like Dincharya, Ritucharya, Aahara Vidhi Vidhana, Na Vegadharneeya etc. are given in classical literature to keep one in healthy state. Concept of Vega in contemporary science, can be compared to natural biological reflexes related to autonomous nervous system and their suppression will result in Vataaggravation and ultimately may lead to various pathologies in body. In the present era, because of stressful jobs, due to hesitation, no proper facilities to void, engaged in important work, person may suppress various urges. Ayurveda describes fourteen Vegas and their suppression or premature initiation is a key factor in manifestation of ailments through disturbance in equilibrium of Doshas. In this article, diseases produced in human body on suppressing natural urges as given in text are discussed along with their treatment and an attempt is made to analyse pathophysiological changes in different organ systems.

**Keywords:** Ayurveda, Adharniya vega, Natural urges/reflexes

### 1. INTRODUCTION

Ayurveda aims at maintaining good health in healthy persons and treat diseased one through specific measures. It emphasizes on promotion of happy life by maintaining equilibrium in **Tridoshas**. Vitiated **Doshas** disturb equilibrium of **Dhatus** and **Malas** (excreta) and thus causes various diseases. **Vata Dosh** is responsible for **Gatti** i.e., motion in the body. **Vega** means 'Pravah' means **Gattishil** related to **Vata** and is compared to natural urge.

Basically, there are two types of urges described in the text:

1. **Dharniya Vega**
2. **Adharniya Vega**

**Dharniya vega:** These urges arise at our psychological level and suppressing them is important for leading a virtuous life. These are further divided into 3 parts- "**Manovakkayakarmanaam.**" **Lobha** (Greediness), **Shoka** (Grief), **Bhaya** (Fear), **Krodha** (Anger), **Nirlajata** (Shamelessness), **Irshya** (Envy), **Abhyasuya** (Jealousy), **Parush** (Talking harsh), **Atimatrasya Suchak** (Telling one's secrets to others), **Anruta** (Telling lie), **Vakysya Akalyuktasya** (Untimely talks) **Par Pidya** (Act of harming physically), **Par Stree Sambhog** (Prostitution), **Steya** (Stealing), **Hinsa** (Physical Violence). These **vegas** must be suppressed

**Adharniya Vegas** means these urges shouldn't be voluntarily suppressed as they cause disturbance in psychosomatic activities of body thus hampering its integrity. They are the natural reflexes that maintain homeostasis of our body. In Ayurveda, suppressing urges or their forceful expulsion comes under volitional transgression (i.e., **Prajna – Paradh**).



Figure 1: Disease manifestation by Vegadharana

Number of Adharniya Vegas described in different Samhitas are explained in Table 1

Table 1: Adharniya Vegas

Charak	Sushruta	Ashtang hridaya	Ashtang Sangrah
13	13 + 1 (Apathya Nimitja)	13	14
Described Udgara Vega in place of Kasa	Described as Udavarta to all Adharniya Vegas (as described by Charak)	Described Kasa in 13 Vegas but explained Udgara Vega also	Described both Udgara & Kasa Vega

- |     |                      |   |                                    |
|-----|----------------------|---|------------------------------------|
| 1.  | Vata                 | – | Apana Vayu (Flatus Passing Reflex) |
| 2.  | Vin                  | – | Pureesha (Defecation Reflex)       |
| 3.  | Mutra                | – | Micturition Reflex                 |
| 4.  | Kshava               | – | Sneezing Reflex                    |
| 5.  | Tritta               | – | Trishna (Thirst Reflex)            |
| 6.  | Kshudha              | – | Hunger Reflex                      |
| 7.  | Nidra                | – | Sleeping Reflex                    |
| 8.  | Kasa                 | – | Coughing Reflex                    |
| 9.  | Kshrama Janita swasa | – | Panting Reflex                     |
| 10. | Jrumbha              | – | Yawning Reflex                     |
| 11. | Ashru                | – | Vashpa (Tear Reflex)               |
| 12. | Chardi               | – | Vomiting Reflex                    |
| 13. | Retas                | – | Seminal Discharge Reflex           |

## 2. MATERIALS AND METHODS

- Classical texts of Ayurveda viz. Charaka Samhita, Sushruta Samhita, Ashtang hridaya and Ashtang Sangrah with commentaries were consulted as references of Adharniya Vega.
- Literature related to consequences of suppressing urges in various research articles on Pubmed, Google Scholar etc. were collected.
- These references from both the streams of science (ayurveda and conventional) are compared and analyzed critically.

### How suppression of natural urges leads to diseases in human body?

#### 2. Vata – Apana Vayu (Flatus Reflex)

Gases in the body are formed as a result of swallowed air, bacterial action inside gut, gases diffused from Blood into GIT etc. Certain foods like Onion, Cabbage, Vinegar cause more expulsion of flatus. Partial Pressure of Methane gas produce can reach as high as 200 mmHg

Symptoms on suppressing flatus reflex:

- Vata-Mutra-Shakrat Sang – Trapped gases in abdomen disrupts peristaltic movements and thus hampers separation of wastes from body, moreover Apana Vayu is responsible for elimination of all substances.
- Agnivadga – i.e., Mandagini as bloating interferes with Samana vayu's functioning it causes indigestion
- Hridroga – frequent impedance on flatus expulsion can lead to Arrhythmia.
- Gulma and udavarta- Trapping of gas at colonic flexure causes distention of colon
- Ruk – Headache and abdominal Pain due to nerve irritation.
- Kasa / swasa / Hikka / Pratishtyaya / Galgraha- raised intraabdominal pressure irritates diaphragm and ultimately respiratory disorders
- Aadhman – Because elimination process is hampered
- Mukhen Vitt Kshipeta – Peristaltic waves occur to decompress intestine. Sometimes strong contractions push fecal matter backwards through pyloric sphincter in stomach.
- Balaas Pitta Prasara- Aggravated vata inside body disturbs pitta and kapha also

#### 3. Shakrat / Purisha (Defecation Reflex)

Fecal matter is composed of dead bacteria, fat, bile pigments, organic matter, proteins etc. and defecation is natural process regulated by central, spinal, peripheral and enteric neuronal activities.

Symptoms arise on suppressing defecation reflex:

- Pindikodwestha – Feces accumulated causes hypernatremia, leading to muscle cramps
- Pratishtyaya and Shiroruja – Allergens and toxins retained in body may trigger it
- pakvashyashula – due to excessive accumulation of undigested food in intestine.
- Udharva Vayu – Charka explains Aadhyaman and Vata-Varcho Apravartanam i.e., due to gases formed from retained feces cause abdominal distention.
- Parikartika – Local irritation in anus due to loaded rectum

- *Hridasya Uprodhna* – excess straining may cause cardiac problems
- *Mukhen Vitt Pravriti* – Due to backward peristaltic movements. Generally bad odour occurs

#### 4. **Mutra Vega Vidharan (Urination Reflex)**

Many studies have been done proving neurohumoral changes when we voluntarily suppress the urge of urine. It causes rise in plasma catecholamine, plasma 5H-AA, urinary catecholamine, blood pressure, respiration rate. This will precipitate stress disorders.

##### **Symptoms arise on suppressing urination reflex**

- *Angabhanga* – (*saphotanam ev*) pain in pelvic region due to stretching of muscles
- *Ashmari* – Urine is formed after filtration in Bowman's capsule, but if urine is willingly held, mineral particles start accumulating at a point forming renal stones.
- *Vasti* – *Mrerd & Vankshan Vedana* – Retention of urine vitiates *Vata* and may cause urinary tract infections thus pain in bladder, penile and pelvic region occurs.
- *Krichhen Mutram, Alpa* – *alpam* – chronic withholding of urine leads to weakness of pelvic floor muscles, resulting in dribbling with dysuria
- *Guda* – *Mushak* – *Nabhi Pradesh* – *Murdhani Shula* – Vitiated *Vata/raised urine volume*, stimulates nerve endings and surrounding tissues, resulting in pain.
- *Aanadha Vasti /Vankshan Aanah* – retrograde pressure leads to hydronephrosis and distention of bladder.
- *Vinama* – Discomfort in lower abdomen, causes bending of body parts.

#### 5. **Kshaya Vega (Sneezing Reflex)**

This reflex is triggered by 5<sup>th</sup> Cranial nerve to medulla. It is helpful in keeping the nasal cavity clear from dust, allergens, or foreign bodies. Study shows if we try to suppress sneezing through plugging the nose and closing buccal cavity, around 174 mm Hg pressure is generated in nose and causes

- *Indriya Daurbalya* – increased pressure may rupture eardrum and can cause ear infections, rare but blood vessels of eyes, ear, nose may damage on holding a sneeze.
- *Manya Stambha* – extra pressurized air inside body can cause potential injuries.
- *Ardita* – Tearing of blood vessels and damage to sinus and in rare case brain hemorrhage occur can result in Bell's palsy.
- *Kanta-aasya purnatavam-Kujan* – Happens due to pushed air in the throat.
- *Ardha Vibhedhak /shirashula* (Charaka)/*Ateeva Toda* (Sushrut) - it happens may be due to trigeminal nerve involvement

#### 6. **Tritta /Trishna (Thirst Reflex)**

This reflex is important for maintaining fluid and electrolyte balance in body. But holding this urge may cause following symptoms:

- *Bhrama-Moha* – When insufficient fluid is taken, hypovolemia happens, causing hypotension. This alters functioning of vital organs and thus mental confusion and dizziness happens.
- *Hrid vyatha-Hridgada* – Hypotension alters pumping ability of heart
- *Shrama* - Body organs are deprived of proper nutrients & oxygen due to improper blood supply.
- *Anga Sadh* – Dehydration causes intracellular acidosis and thus slows Adenosinetriphosphate (ATP) production leading to myalgia.
- *Kanthaasya Shosh* – Saliva production decreased due to decrease in water intake that normally moistens mouth and throat.
- *Badhriya* - Mineral imbalance in endolymph, results in impairment of hearing.

#### 7. **Kshudha (Hunger Reflex)**

A desire or a need for food is hunger. It is a natural reaction to an empty stomach. It helps in maintaining an adequate nutrition supply for body. Suppressing *kshuda* results in:

- *Angabhanga* – Due to insufficient nutrients and mineral, ATP production decreases and thus less glycogen. Less energy levels causes pain.
- *Aruchi* – *Glani* – Malnutrition, electrolyte imbalance results in anorexia.
- *Karshya* – Muscle wasting occurs to fulfil energy requirements.
- *Shula* – Due to Calcium and other nutrients deficiency
- *Bhrama* – Hypoglycemia leads to giddiness

As per *Sushruta*, *Tandra* and *Drishti daurbalya*- This all happens due to insufficient energy production, hampering normal functioning of organs.

*Charak* added *Vaivarnya* – Less Iron content may cause Anemia and person gets pallor appearance.

#### 8. **Nidra Vega (Sleeping Reflex)**

When excitatory areas of upper brain stem and reticular activating system are fatigued and get inactive, they produce sleep and its suppression results in following symptoms:

- *Moha* – psychosis occur in prolonged sleep deprivation as it disturbs prepulse inhibition
- *Murdha-Akshi Gaurav/Shiro-Akshi Jadya* (Sushrut) – hyperactivity of pain sensitive structures (facial muscles, eye strain, physical exhaustion- due to increase stress hormones levels)
- *Aalasya/Tandra* (Sushrut) – Laziness due to prolonged deprivation of sleep imbalance thyroid hormones.
- *Jrumbhika* – Yawning occurs to bring more Oxygen and acts as a nerve stimulant

- *Angamarda* – Malaise due to overexertion of muscles.

#### 9. **Kasa Vega (Coughing Reflex)**

Cough is a defensive mechanism generally evoked in context to irritation caused to bronchi or trachea. Phlegm secreted from mucus membrane, may contain any foreign material, dust particles, allergens, many bacteria (like *Mycobacterium tuberculosis*) and hookworm etc.

Symptoms occur on suppressing or forceful execution of cough are:

- *Tatt Vridhi* – i.e., increase in coughing as it is a protective mechanism to get rid of allergens etc.
- *Shwasa* – mucus retained inside narrows airways and breathing problems
- *Hridroga* – cough causes changes in intraabdominal and intrathoracic pressure thus preload and afterload of heart hemodynamics is affected
- *Aruchi* – Anorexia happens generally secondary symptom to certain infections
- *Shosha* – Infected sputum if swallowed causes bacterial or parasitic diseases leading to weight loss.
- *Hikka* – Raised intra-abdominal pressure irritates diaphragm, causes its involuntary spasm.

#### 10. **Kshram Shwasa Vega (Panting Reflex)**

This is a mechanism of controlled increase in respiratory frequency accompanied by a decrease in tidal volume. Its purpose is to increase ventilation of upper respiratory tract, preserve alveolar ventilation and thereby elevate evaporative heat loss. If we hold it following symptoms occur:

- *Gulma* – At raised respiratory frequencies and body temperature alveolar hyperventilation begins to develop for thermal regulation but if it is suppressed Carbon dioxide builds up in blood causing hypercapnia i.e., in Ayurveda vitiation of *Vata* causes *Gulma*.
- *Sammoha* – Confusion happens as hypercapnia features confusion, headache and decreased neural activity.
- *Hridroga* – When hypoventilation occurs, cardiac output is increased causing elevation in blood pressure.

#### 11. **Jrumbha (Yawning Reflex)**

This reflex occurs when stimulus like stress, fatigue, sleepiness produces complete jaw extension followed by inhalation, eye close, stretching of ear drum and exhalation. This happens to meet oxygen demands and acts as a nerve stimulant by flexion and increased heart rate. *Vagbhata* said suppression of *Jrumbha* results in *rogas* as told in suppression of *Kshwaha*. *Charaka* said following symptoms will occur:

- *Vinama* – Bending of body due to muscular weakness and decreased oxygen supply
- *Aakshep-Sankocha-Supti-Kampa-Pravepnam* – These neurological disorders arise as mechanical stimulation of carotid body occur and hormones like adenosine, catecholamines are released

As per *Sushruta* these symptoms occur

- *Manya Stambha/Galastambha* – It happens due to neck strain and extra pressure on spine.
- *Shirovikara* – Frequent suppression can lead to consequences of thermoregulatory dysfunction and hypoxia associated with brain disorders.
- *Kshrotra-Aanana / Ghrana / Vilochana Vikara* – yawning may act as defence and equilibrate air pressure in middle ear with outside ear pressure. As Eustachian tube gets blocked, it causes increase in pressure that leads to ear barotrauma. This can cause nasal bleed. Intraocular pressure is also altered, leading to macular damage with optic nerve impairments.

#### 12. **Ashru Vega (Tear Reflex)**

Reflex tears are produced in order to wash out irritants, foreign particles or vapors. Nasal tears nourish and lubricate eyes. Psychic tears are produced from stress, pleasure, pain etc. It has a natural pain killer called Leucine, Enkephalin

Symptoms on suppressing tear reflexes are:

- *Pinasa* – through nasolacrimal duct tears empty in ear and causes Rhinorrhea.
- *Akshiroga* – If eyes are not lubricated time to time and foreign particles are not washed away, they cause various irritations in the eye.
- *Shiroroga / Shirogurutavam* – sinuses get congested due to tear drainage, elevated pressure can cause sinus headache. *Manya stambha* – Torticollis may happen due to cold (*pinasa*) or swollen lymph nodes.
- *Aaruchi* – low Serotonin levels raise anxiety and decrease appetite.
- *Bhrama* – due to anxiety person has difficulty in concentration.
- *Gulma* – As our tears are suppressed, vitiation of *Vata* happens and causes *Gulma*
- *Hridroga* – Chronic anxiety causes arterial fibrillation and other cardiac disorders

#### 13. **Chardi (Vomiting Reflex)**

It is an autoregulated system of body to expel off metabolic waste products produced due to raised acidic contents or endotoxins. It may result from food poisoning or intestinal obstruction etc. But when it is suppressed, it leads to certain endogenous and exogenous diseases like: - Symptoms

- *Visarpa/Kohta/Kushta/Vyanga/Kandu* – Due to suppression of vomiting, toxins absorbed back in blood stream can lead to skin diseases.
- *Pandu* – Anemia occurs due to anorexia and supply of less nutrients to body.
- *Jwara and shvayathu* – Rise in body temperature as endotoxins are not expelled out.
- *Kasa/Shwasa* – Raised intraabdominal pressure may cause respiratory disorders

- *Hrullasa* – Nausea is present due to epigastric discomfort

#### 14. **Retas (Seminal Discharge Reflex)**

This sexual urge stimulation is spinal reflex integrated at sacral & lumbar level. Penis erection is caused by parasympathetic impulses, these fibers secrete nitrous oxide, acetylcholine. Fluid emission is sympathetic action.

Suppressing seminal discharge reflex causes:

- *Shukra Stravan* – due to stage of emission in ejaculation
- *Guhyavedna* – occurs due to retained semen and seminal vesicular congestion
- *shvayathu* – Inflammation due to retrograde ejaculation.
- *Jwara* – Hyperthermia due to Urinary tract infections and Epididymitis etc.
- *Hridayatha* – studies show ejaculation reduces man's blood pressure temporarily, but when suppressed can lead to cardiac disorders
- *Mutrasanga* – semen enters bladder instead of emerging through penis, so it comes with urine.
- *Angabhanga* – due to changes in biochemical functioning.
- *Vridhi* – Epididymitis or fluid retention in scrotal region occurs
- *Ashmari* – A stone in seminal vesicles or spermatic ducts is formed due to accumulation and concentrated semen
- *Kshandata* – retrograde ejaculation can cause male infertility.

#### 15. **Udgara Vega (Belching Reflex)**

Regurgitation of a mixture of swallowed air with gastric, pancreatic juices and some gases like Nitrogen, Oxygen and Carbon dioxide occurs. It is physiological venting of excessive gastric air leading to relaxation of lower esophageal sphincter and when air passes through upper esophageal sphincter audible belch is heard.

Symptoms arise on suppressing belching reflex:

- *Hikka/ Shwasa* – retained gases in abdomen irritates diaphragmatic muscles and causes hiccups and respiratory disorders like Shwasa due to raised intraabdominal pressure.
- *Aruchi* – Due to feeling of fullness.
- *Kampa* – Nerve endings stimulated cause tremors in some cases.
- *Hridya Urasa badha* – retrosternal or chest pain/discomfort due to bloating.

*Aacharya Shushruta* mentions: *Ghora vikara pawan prasuta – Vataja Rogas* occurs.

### 3. TREATMENT

*Nidaan Parivarjan* is the first treatment to this *Prajnapradha (vegadharna)*

*Aacharya Sushruta* advised all regimes used for alleviation of *Vata Dosha* and has mentioned certain formulations like – *Bhadardrvadi Voga, Panchmulikshrit Kshiram* etc.

*Aacharya Charaka* and *Vagbhatta* has mentioned following can be done

1. Flatus Reflex – External & Internal administration of unctuous substances, fomentation, per rectal suppositories, intake of foods and drinks having carminative action, enema.
2. Defecation Reflex – Suppositories, massage, sitz bath, hot fomentation, enema, and food & drinks that facilitate bowel movement and *Pramathi* in nature should be given
3. Micturation Reflex – *Avpeedaka Ghrita* (intake of Ghee in *Uttama Matra* before & after meals), fomentation, sitz bath, massage, enema.
4. Belching Reflex – As we treat hiccups like Medicated Smoke, pouring water etc.
5. Thirst Reflex – Cold, refreshing drinks are advised
6. Sneezing Reflex – strong fumigation, medicated smoking, nasal drops, oiling, and fomentation, ghee after meals should be taken.
7. Hunger Reflex – Unctuous, hot and light food is advised
8. Sleeping Reflex – Restoring to sound sleep and soothing massage of body is advised
9. Coughing Reflex – medicated smoke, steam etc.
10. Panting Reflex – Proper rest and measures to control *Vata Dosha*
11. Yawning Reflex – All *Vata* pacifying measures
12. Tear Reflex – Sleep, medicated alcohol, pleasing stories and positive conversation
13. Vomiting Reflex – induction of vomiting, medicated smoking, fasting, bloodletting, dry food, physical exercise, bloodletting and purgation.
14. Seminal Fluid Discharge Reflex – meat of cock-chicken, medicated fermented drinks, Sitz bath, massage with herbal oils, *Shali* rice, enema, milk, intercourse with beloved woman.

### 4. DISCUSSION

These *Vegas* are vital phenomena which are indicator of normal biological functioning of body. We should respect our body's natural urges to maintain homeostasis. As above said, suppressing defecation, micturition, flatus reflexes cause many digestive disorders thus has impact on body's nutritional value. Many sensory organs are involved when one suppresses yawning, coughing and sneezing reflexes and impairs one's standard of living if these organs don't function properly. Skin diseases are caused on holding vomiting reflex. Moreover, if person doesn't express his grief as in case of tear reflex, he may develop certain mental disorders. Respiratory, circulatory, endocrine, nervous, reproductive systems are involved in case person suppress reflexes of seminal fluid,

thirst, eructation, hunger. Suppressing sleep reflex hampers body and mind coordination. It also decreases alertness of the person. Thus, *Vega Dharna* leads to both localized and systemic consequences.

## 5. CONCLUSION

Concept of Vega Dharna is quite necessary to understand as many disorders can arise, when one gets habitual of withholding natural urges. As said prevention is better than cure so, forceful suppression and execution of these Vegas must be avoided to create a balance mind-body health.

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