

Physiological aspects of *Oja Kshaya* in *Prameha* and Clinical importance

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Abstract:

Ayurveda is one of the ancient and fruitful sciences for human being. Science of *Ayurveda* is based on the concept of *dosha*, *dhatu*, and *mala*. The structural and functional integrity of body depends upon *dhatu* (major structural components of the body). Essential function of the *Oja* is to maintain vitality and sustaining the integrity of life. Any abnormality in the physiological and psychological functions of *Oja* leads to serious health complications and death. Then vaidyas treat discipline of abnormalities of *Oja* in current clinical practice. In this article an attempt has been made to correlate the physiological aspects of *Oja kshaya* in *Prameha*.

Key words: *Avarana*, *Ayurveda*, *Oja*, *Ojakshaya*, *Prameha*, *Vata*

Introduction:

The Aims of *Ayurveda* is to preserve the health of the healthy and cure the disease of the unhealthy. The theory of *dosha*, *dhatu*, and *mala* is uniqueness to *Ayurveda*. In *Ayurveda*, health is a state where the *dosha*, *agni*, *dhatu*, *mala*, all the physiological process are in homeostatic state and soul, sense organ and mind are in a state of total wellbeing.¹ The ancient *Ayurveda* textbook *Samhitas* has described *Oja* as an important principle; which is essential for well-being of the body, and mind.² *Oja* is the purest, supreme essence formed from all seven *dhatu*³; that is vital for life characterized by (immunity). *Acharya Chakrapani* has explained the concept of *Oja* is associated with the *bala* (strength) and *vyadhikshamatva* (resisting power of the body).⁴

Material & Methods – For this study, the essential materials have been collected from the Ayurvedic classics and available commentaries of *Charak Samhita*, *Susruta Samhita*, *Ashanga Sangraha*, and *Ashanga Hrudaya*.

Formation and circulation of Oja –

Oja is formed as prime and super excellent essence during the metabolism of each *dhatu*.⁵ It is the *sneha* part of each *dhatu* having its purest form and supreme quality.⁶ *Oja* is present in every *dhatu* in latent form and is manifested as supreme quality after its proper action of all *dhatvagni*. *Oja* is located in the heart, which keeps all the beings content and alive. It is the initial essence of embryo and nourished by this essence component.⁷ It enters the heart during cardio-genesis, and its depletion leads to degeneration of the body.⁸ The ten great vessels originate from heart and which is carry the *Oja* in whole body. The location of *Oja*, *Sadhaka pitta* and *prana vata* are *hridaya* and it is associated with psycho-cognitive functions and distinct spiritual characters.

Function of Oja –

The general functions of Oja are as follows –

- ***Sthiropachitamamsata*** – Enhance the stability and growth of *Mamsa dhatu*, and it is due to the essence of all *dhatu*s.
- ***Sarvechesta*** – Ability to perform the all activities of physical, mental, speech.
- ***Svapratighat*** – flow of energy without obstruction – this is due to *bala* characterized by load carrying etc.
- ***Svaraprasado*** – Clarity of voice, and brightness of color complexion.
- ***BhayanamAbhyantranamKarnaamKaryaPrtipati*** – *Karma Indriyas* (faculties of action) are performing the functions speech, receiving, movement, elimination and enjoyment; *Janendriyas* (sensory faculties) are doing the functions like perception of knowledge i.e. sound, touch, sight, taste, and smell.

Causes of vitiation of Oja –

- *Abhighata* (traumatic disorders),
- *Kshaya* (diminution of *dhatu*- impaired metabolism),
- *Kopa* (anger/irritability),
- *Shoka* (a state of ill-being due to loss of children or affliction or misfortune),
- *Dhyana* (insensibility/meditative appearance),

- *Srama* (physical exhaustion),
- *Kshudha* (Severe appetite)

Commentator *Dalhana* has explained the *Oja* is located in the heart, which is *Sara* (essence) of all *dhatus*. *Vata* (*Vyana vata*) with the help of *Pitta* (*Sadhaka pitta*) makes *Oja* expelled from the heart and makes it circulate throughout the body and carried by *dhatuvaha srotas* (channels carrying *dhatus*).⁹

Pathophysiology of *Ojakshaya* –

These causes have the effect of aggravating the *pitta* and *vata doshas*. This causes *Oja* to become more vitiated in both quantity and quality from its prime location *hridaya*. The *Oja* is of two types, the *para* type and the other *apara* type. Heart is the dwelling place for the superior type of *Oja*. The vessels attached to the heart are the site of other ordinary type of *Oja*. As regards the first category of *Oja*, its volume is fixed. Any diminution in the volumes (that is eight drops) would amount to instantaneous death; Diminution is, however, possible in other type of *Oja* as it happens in the case of diabetes mellitus. The increased *kapha*, *pitta*, *meda dhatu*, *mamsa dhatu* obstructed (*avarata*) the movement of *vata*, which in turn carries *Oja* into *basti* resulting in *Madhumeha*.

General Clinical features of *Ojakshaya* –

Acharya Charaka has mentioned the symptoms of diminution of *Oja*; they are – *Bibheti* (fear), *Durbalah* (loss of physical strength or weakness), *Abikshna dhyayati* (constantly thinking), *Vyathitendriya* (distressed sense organs), *Duskhaya* (diminished complexion), *Durmana* (lack mental strength), *Ruksha* (dry), *Kshama* (emaciated), *Murchha* (syncope/attacks of swooning), *Mamsakshaya* (diminution of muscle mass), *Moha* (confusion/delirium), *Pralapa* (incoherent speech), and *Marana* (death) etc.¹⁰

Specific abnormalities and clinical features of *Oja kshaya*: *Acharya Sushruta* explained in detail about the abnormalities and clinical characteristics of depletion of *Oja* in three stages.¹¹

The abnormalities in quantity and quality of *Oja* are observed in three stages.¹²

- 1) *Oja Visramsa* (Dislodgement of *Oja*)
- 2) *Oja Vyapat* (Derangement of *Oja*)
- 3) *Oja Kshaya* (Diminution of *Oja*)

Table 1: Clinical characteristics of depletion of *Oja* –

Sr. No.	<i>Oja Visramsa</i>	<i>Oja Vyapata</i>	<i>Oja Kshaya</i>
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	(Dislodgement of <i>Oja</i>)	(Derangement of <i>Oja</i>)	(Diminution of <i>Oja</i>)
1.	<i>Sandhi Vishlesha</i> (Feeling of looseness and displacement in joints)	<i>Stabdha Guru Gatrata</i> (Feeling of stiffness and rigidity in body)	<i>Murchcha</i> (Fainting or unconsciousness)
2.	<i>Gatra Sadanam</i> (Fatigue)	<i>Vata Shopha</i> (Unstable swelling due to vitiation of Vata dosha)	<i>Mamsa Kshaya</i> (Emaciation and muscle wasting)
3.	<i>Dosha Chyavanam</i> (Migration of vitiated dosha to other sites)	<i>Varna Bheda</i> (Abnormal change in normal complexion)	<i>Moha</i> (Confusion)
4.	<i>Kriya Sannirodha</i> (Impairment and blockage of all functions in body and mind)	<i>Glani</i> (Lassitude)	<i>Pralapa</i> (Delirium)
5.	-	<i>Tandra</i> (Drowsiness)	<i>Marana</i> (Death)
6.	-	<i>Nidra</i> (Excess sleepiness)	-

Oja is considered as an essential factor for survival of human being. As long as *Oja* is in physiological status, human body remains in homeostatic condition. The all types of abnormality of *Oja* are described with symptoms for knowledge of curability or incurability. These three stages of *ojokshaya* are increasingly severe and harmful leading to death.

Discussion –

The ancient *Ayurveda* textbook *Samhitas* has described *Oja* as an important principle; it performs the physiological function of the body, sense organ, mind and soul. *Acharyas* has described the general causative factors i.e. dietary, lifestyle, and psychological factors for depletion of *Oja*. *Acharyas* explained in detail about the abnormalities and clinical characteristics of depletion of *Oja*.

Excessive taking of heavy, unctuous, sour, and salty food items, eating of newly harvest cereals and newly prepared wines/drinks, sedentary lifestyle, and not doing shodhana (purification) etc. all these causative factors lead to excessive increase in *kapha*, *pitta*, *meda dhatu* and *mamsa dhatu*.¹³ *Acharya Charaka* has mentioned the vitiated *kapha* first vitiates *meda*

dhatu followed by *mamsa* and other *dushya* and then finally vitiates *mutra* to manifest as *prameha*. These are important pathogenic factors leading to an obstruction of functional pathways of *vata* in *prameha*. These obstructed pathways of the *vata dosha* leading to *aavrita vata* condition. Thus, provoked *vata* takes out *Oja* from its sites and brings it to *basti* causing *Madhumeha*.

Table 2: Sampraptti of Oja Kshaya due to Avarana –

<i>Avastha</i>	<i>Clinical features of Oja kshaya</i>	<i>Avarana</i>
<i>Oja Visramsa</i> (Dislodgement of Oja)	<i>Sandhi Vishlesha</i> (Feeling of looseness and displacement in joints)	<i>Kapharuta Vyanavata</i>
	<i>Gatra Sadanam</i> (Fatigue)	<i>Pittavruta Vyana vata</i>
	<i>Dosha Chyavanam</i> (Migration of vitiated dosha to other sites)	--
	<i>Kriya Sannirodha</i> (Impairment and blockage of all functions in body and mind)	<i>Udanavruta Prana Vata</i> <i>Udanavruta Vyana Vata</i>
<i>Oja Vyapata</i> (Derangement of Oja)	<i>Stabdha Guru Gatrata</i> (Feeling of stiffness and rigidity in body)	<i>Udanavruta Vyana vata</i>
	<i>Vata Shopha</i> (Unstable swelling due to vitiation of Vata dosha)	<i>Mamsaruta Vata</i>
	<i>Varna Bheda</i> (Abnormal change in normal complexion)	<i>Pittavruta udanavata</i>
	<i>Glani</i> (Lassitude)	--
	<i>Tandra</i> (Drowsiness)	--
	<i>Nidra</i> (Excess sleepiness)	--
<i>Oja Kshaya</i> (Diminution of Oja)	<i>Murchcha</i> (Fainting or unconsciousness)	<i>Samanavruta Vyana vata</i> <i>Pittavruta Prana vata</i>
	<i>Mamsa Kshaya</i> (Emaciation and muscle wasting)	--
	<i>Moha</i> (Confusion)	<i>Apanaruta Udana vata</i>
	<i>Pralapa</i> (Delirium)	<i>Samanavruta Vyana vata</i>
	<i>Marana</i> (Death)	<i>Udanavruta Prana vata</i>

In condition of Displacement of *Oja* (*vistramsa*) observed the obstruction of *udana vata* by vitiated *pitta dosha*.¹⁴ The observed symptoms are *murchcha* (syncope), *daha* (burning sensation), *nabhi* and *ura klama* (weakness in the umbilical and chest region) and *angasada* (bodyache).¹⁵ In condition of Depletion of *Oja* (*kshaya*) observed the obstruction of *samana vata* by vitiated *vyana vata*. The observed symptoms are *murchcha* (syncope), *tandra* (drowsiness), *pralapa* (delirium), *angasada* (body ache), *agni* and *Ojakshaya* (depletion of digestive functions, and strength).¹⁶ Life and vitality is particularly dependent on *prana vata*, and strength on *udana vata*, and all others physiological activities govern by *dosha*.

Conclusion –

Madhumeha (Diabetes mellitus) which is also termed as *ojomeha* in *Charaka samhita* is one of the *prameha* where excessive *kshaya* of *Oja* s takes place. One of its presentations (or forms) is caused due to *avaranajanya samprapti* (obstructive pathogenesis). *Madhumeha* is one among twenty types of *prameha* characterized by excessive frequency and quantity of urination. *Acharya Charaka* has explained two types of pathogenesis of *Madhumeha*. The first type of pathogenesis (*Dhatukshayajanya*), which is causes *vata* aggravation and all the clinical features of a vitiated *vata* are present in the patient of *kshayaja Madhumeha* (Diabetes mellitus type 1).¹⁷ The second type of pathogenesis (*Vatavaranajanya*), there is an initial involvement of *kapha*, *pitta*, *mamsa dhatu* and *meda dhatu*, that in turn make *avarana* of *vata* leading to manifestation of *Madhumeha* (diabetes mellitus type 2) where features of *kapha*, *pitta*, *meda dhatu* and *mamsa dushti* are also observed. In *avarana* conditions *Udanavruta pranavata*, *Pittavruta udanavata* and *Samanavruta vyanaavata*, the condition of occlusion of *prana* by *udana*, *udana* by *pitta*, and *vyana* by *samana* leads to *Kriya Sannirodha* (loss of all sensory and motor functions), *Oja kshaya* (loss of *dhatu* essence), *balakshaya* (loss of strength), *varnahani* (complexion), and it may even result in the death of the patient. There is a need of further research to evaluate in detail all features of *Oja kshaya* for the betterment of mankind.

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