



CONCEPTUAL STUDY OF EFFECT OF TOBACCO ON OJA

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ABSTRACT

Ayurveda has an unique concept of *Oja* which works as administrator in all body functions like organogenesis, homeostasis etc. *Oja* is present in the body right from *Shukra*, *Shonit* and *Jivatma* union. *Oja* plays a major role in maintaining homeostasis. To understand this we have to study the nature, properties, functions and disorders related to *Oja*. Individual with depleted *Oja* becomes so weak that even *Dosha* in physiological limits cannot make a man healthy. *Ojovikruti* causes various ailments that affect the harmony of body. Factors that affect *Oja* ultimately leads to various diseases. Tobacco leaves are *Laghu*, *Teekshna*, *Ushna*, *Vyavayi* and *Vikasi*. They have *Tikta*, *Katu rasa*, *Katu Vipak* and *Madak Prabhav*. Tobacco reduces *Kapha*, *Vata* and increases *Pitta*, relieves *Shwas*, *Kas*, tooth ache and *Vata* in abdomen (*Koshtha*). It facilitates downward movement of *Vata* and cleanses the urinary bladder. It is antihelminthic & anti pruritic. But tobacco with its properties which are opposite to *Oja* leads to *Ojo Vikruti*. Despite of having medicinal properties it is used to enjoy the pleasant feeling of nicotine rush. Tobacco poses enormous threat to public health. Tobacco causes heart and blood vessel diseases, lung diseases, reproductive diseases, cataract etc.

KEYWORDS : *Oja*, *Ojovikruti*, Tobacco, properties, diseases.

Introduction :

India is the largest producer and consumer of tobacco after China. Tobacco addiction is accounted as about 35% adults in India including both sexes. Every year million deaths are caused by tobacco in India. Tobacco addiction accounts for 45% of all cancers in India. It also causes pulmonary Koch's. These ailments are preventable by stopping tobacco use. Tobacco is used in the form of smoking, *Gutakha*, *Panmasala*, *Masheri*, Tobacco chewing and *Jarda*. Diseases caused by tobacco decrease quality of life, sometimes causes death also.

Ayurveda has an unique concept of *Oja*. It is present in the body from foetal life. It helps to maintain the harmony of life. It works as administrator of entire body and its functions. It is also described as vital entity of body. Due to its decrease or absence an individual wanes and dies. Destruction of *Oja* causes death of an individual. Thus *Oja* has capacity to keep the body working without any change in its normal physiology and psychology. The word "*Dehasthiti Nibandhanam*" indicates that *Oja* guards against adverse conditions in the body. Prolonged use of tobacco causes many fatal ailments. So this article is an attempt to understand the effect of tobacco on *Oja*.

Aim :

To elaborate effect of tobacco on *Oja*.

Objectives :

- 1) To study effects of tobacco in Ayurvedic and modern way.
- 2) To study concept of *Oja*.

Materials :

- 1) Ayurvedic Samhita and books.
- 2) Authentic internet data till date.

Methods :

Conceptual study of :

- a) *Oja*
- b) Tobacco and its ill effects.

Conceptual study of *Oja*:

The entity which keeps the harmony of body is called *Oja*. It has capacity to keep body, sense organs, mind and soul together functioning smoothly. It helps to keep a person healthy by maintaining the balanced state of *Dosha*, *Agni*, *Dhatu* and *Mala* with their normal functioning and keeping the *Atma*, *Manas* and *Indriya* in satisfied and properly working condition.

Individual with depleted *Oja* becomes so weak that even *Dosha* in physiological limits cannot make a man healthy. This indicates that *Oja* plays a major role in maintaining homeostasis.

Par and *Apar* are the two types of *Oja*. *Par* is chief & vital. It's quantity is 8 *Bindu*, located in the heart. Slight decrease in *Par Oja* leads to death; so it is called as site of "*Prana*". As heart is its location any entity or ailment that attacks the heart leads to *murcha* or death. *Apar Oja* is present all over the body flowing through *Dashdhamani*, *Ardhanjali* in quantity and provides satisfaction. Decrease in *Apar Oja* leads to various diseases like "*Prameha*".

Qualities of *Oja* :

Guru, *Sheeta*, *Mrudu*, *Shlakshna*, *Bahal*, *Madhura*, *Stheera*, *Prasanna*, *Picchila* & *Snigdha*. These qualities are similar to milk & *Ghrut* & opposite to *Madya* & *Visha*. It is also *Somatmaka*, *Shukla*, *Sara*, *Vivikta*, *Mrudau* & *Murtsana*. *Par Oja* is slightly red and yellowish tinged. *Apar Oja* resembles colour of *Ghrut*, sweet in taste and having smell of *Laja*.

Abnormalities of *Oja* as per Sushruta:

- i] *Ojovisrans* includes : *Sandhivishlesha*, *Gatrasad*, *Doshachyavan*, *Kiryasannirodha*.
- ii] *Ojoviyapad* includes: *StabdhaGurugatrata* *Vatashopha*, *Varnabheda*, *Glani*, *Tandra*, *nidra*.
- iii] *Ojokshaya* includes: *Murcha*, *Mamsakshaya*, *Moha*, *Pralap*, *Maran*.

Abnormalities of Oja as per Charak:

Bhay, Dourbalya, Dhyayatee, Vyathita Indriyatwa, Durmana, Duschaya, Ksham, Ruksha etc.

Causes of Ojakshaya:

Ativyayam, Chinta, Dry food, less eating, exposure to wind and sunheat, fear, grief & sorrowness Rukshapan, Nightawakening, excess elimination of Kapha, Rakta, Shukra and Mala, Kala (old oage), Abhighata and excess sex. Hot, spicy, bitter, sour and pungent food.

Factors responsible for Ojovruddhi are *Snigdha, Laghu, Madhura Ahar, Cow milk, Proper Agni, Bath and holy jewellery, Jivaniya Dravyas, Satvik mind, Bramhacharya, Milk and Mamsrasa.*

Conceptual study of Tobacco:

Tobacco was introduced in India by Portuguese 400 years ago Indian tobacco refers to *Lobalia inflota*, solanaceae family. *Nicotina tabacum* and *Nicotina rustica* are commercially cultivated. Tobacco contains Nicotine and Nicotinine as active principles. It is used in form of smoking and other smokeless forms. Smokeless tobacco contains 3000 hazardous chemicals while tobacco smoke contains 4000. Most of them are carcinogens. Carbon monoxide, Acetone, Ammonia, Cadmium Arsenic, methane, Tar etc. are present in tobacco. High levels of benzopyrene in *Masheri*, snuff & chewed tobacco damage the DNA part which protect the cells from cancer. Nicotine is main culprit that makes a person addictive. It is absorbed through mouth tissue directly into blood and reaches the brain. Alters the levels of dopamine and noradrenalin. This gives immediate enjoyable feeling and distraction from unpleasant feelings termed as nicotine rush. But it lasts for short period and a person uses the tobacco repeatedly to get physical and psychological pleasant feelings.

Nicotine is very toxic and exists in all parts of tobacco plant. It is colourless, volatile, hygroscopic, oily, natural liquid alkaloid, turns brown and resinous on exposure to air. It has burning acrid taste and disagreeable odour.

Toxic effects of tobacco produce symptoms like OPP poisoning. It occurs after ingestion, inhalation or skin contact of tobacco products. 60mg of nicotine is lethal dose for adults.

Acute toxic effects tobacco use causes cancers of G.I. tract, lungs, urinary bladder, cervix, penis, kidneys, liver, pancreas, and myeloid leukemia. It also causes 1) heart and blood vessel diseases like. M.I. C.V.A., D.V.T. 2) Respiratory diseases like COPD, Asthma, Koch's etc. 3) Reproductive diseases like abortion, E.D. Impotence foetal death, L.B.W., stillbirth etc. 4) Other complications as cataract, osteoporosis, peptic ulcers, periodontitis etc. Prevalence of T.B. is three times more in smokers.

Conceptual study of tobacco from Ayurveda:

Tobacco stick fire was mentioned in *Lougakshi Smriti* so tobacco must have been known to ancient Indians of 7th century A.D. *Yoga Ratnakar* mentioned the medicinal use and ill effects of tobacco.

Its synonyms are *Tamraparni, Tamakhu, Dhoosar, Dhoomvruksha Dhoomyantra Prakashak* etc. Tobacco leaves are *Laghu, Tikshna, Ushna, Vyavayi* and *Vikasi*. They have *Tikta, Katu rasa, Katu Vipak* and *Madak Prabhav*. Tobacco reduces *Kapha, Vata* and increases *Pitta*, relieves *Shwas, Kas, tooth ache* and *Vata* in abdomen (*Koshtha*). It facilitates downward movement of *Vata* and cleanses the urinary bladder. It is antihelminthic & anti pruritic. It causes *Vaman, Bhram, Mada*, increase in *Pitta* and eye disorders like blindness. Smoking of tobacco is *Teekshna* and causes

destruction of heart and semen, increases *Pitta* & decreases *Kapha* and *Vata*. Tobacco Leaves are used in dried state. Which are neither tasty, nor it is a medicine, neither fragrant nor attractive. Still people use it as they become addict to it. Collectively all above properties are similar to description of *Rajasik* and *Tamasik Dravya*. So tobacco can be considered as *Rajasik* and *Tamasik Dravya*. *Tamasik Dravya* like *Madya, Sura* etc. that hampers the function of brain are called as *Madakari*. Tobacco having *Tamasik* & *Rajasik* characteristics leads to *Mada*. *Mada* is described as having same symptoms of *Mada* due to alcohol. But these symptoms lasts for short period.

Bhrama is due to *Raja, Pitta* and *Vata*. These three causes destruction of the integrity of *Tarpak Kapha*, loosing *Sthiratwa* of body. This leads to *Chakravat Bhram*.

Tobacco is much popularly used in the form of smoking. Ayurveda also promotes different smoking (*Dhoompan*) methods. It is indicated to maintain health and also to get rid of diseases mostly *Urdhwajatrugata Vat Kaphaj Vikara*. Various norms of *Dhoompan* are explained like *Dhoompan vidhi*, Time of *Dhoompan*, types of *Dhoompan*. Use of *Dhoomnetra* is told to keep away ill effects of *Dhoompan*. *Dhoomnetra* decreases the *Tikshnatwa* & speed of *Dhoom*. *Dhoom* is expected to be relieved from mouth only rather than nose to secure the eyes. 8 specific times are suggested for *Dhoompan* when there are chances of *Vata* & *Kapha* vitiation during a day. *Prayogik Dhoompan* is suggested twice a day, *Snaihi* once and *Vairechanik Dhoompan* three to four times in a day. Pregnant woman, poison ingested person, grief affected, fatigued, intoxicated, a person with raw digestion and metabolism, fainted and thirsty, *Pitta* vitiated, alcohol consumed person etc. should not use *Dhoompan*.

Improper *Dhoompan* leads to deafness, blindness, bleedings and giddiness. While excess *Dhoompan* leads to hotness and dryness of palate and throat, thirst, unconsciousness, excess bleeding, fainting, dizziness and hotness in sense organs.

Tobacco is used as *Prativish* against *Kuchala* poisoning. Thus indicating tobacco as a *Vish* (poison). A poison which have lost its poisonous properties after keeping for long time, inactivated by antidotes, burnt due to forest fire or dired in wind and sun, lacking of ten properties of poison is called as *Dushivish*. It doesnot cause acute illness or death but shows symptoms after some period, in presence of favorable conditions. *Dushivish* causes *Bhrama, Shukarakshaya*, skin diseases, *Trishna, Atisara, Vivarnata, Mukhavairasya, Murcha, Vaman, Gad Gad vakyata and Arati*. Tobacco doesn't possess all ten properties of *Visha*. But few properties of tobacco similar to *Visha* and tobacco's ill effects make tobacco to fulfill criteria of *Dushivish*.

Discussion:

Oja with all his ten properties keeps a person healthy. It guards against adverse conditions that disturbs homeostasis. *Oja* depends on the food that we eat and activities that we follow regularly. Depending on properties of *Ahar* & *Vihar* there is increase or decrease in *Oja*. *Ahar* & *Vihar* with same qualities will increase and with opposite properties will decrease the *Oja*. Heart is main site of *Oja*. Any danger to heart will disturb the *Oja*.

Tobacco is *Rajasik* and *Tamasik* according to its described properties. Tobacco has *Katu, Tikta Ras, Katu Vipak, Ushna Veerya, and Madak Prabhav*. It is *Tikshna, Laghu Vyavayi, Vikasi, Ruksha*, unpleasant to smell, not attractive and *Dhoosar*. All these properties are exact opposite to *Oja*. *Oja* has *Madhur Ras, odour of Laja, colour of Ghrita*. It is *sheeta, mrudu, Guru, Sthir, Shlakshna, Snigdha* and *Shukla*.

When someone uses tobacco for first time he experiences nicotine rush and feels happy for short period. This pleasant feeling disappears very soon. This can be compared to *Mada*. Nicotine rush symptoms are comparable with *Atiramyā* and *Tatkalik* symptoms of first stage *Mada*. It is also called as *Monovikar*. *Malin dravya* like tobacco causes vitiation of *Tridosha* giving rise to *Mada* by blocking *Ras*, *Rakt* & *Manovah* channels. Tobacco with its properties also leads to *Bhrama*, affecting *Stirathwa Guna* of *Oja*.

Symptoms of Green tobacco sickness are acute. Toxic effects of tobacco indicates its negative effect on *Oja*. Tobacco is used as *Prativish* in '*Kuchala*' poisoning. This reference indicates towards toxicity of tobacco.

Tobacco is used as a medicine in various ailments. But due to its nicotine content a person becomes addict to it when used separately leading to improper use. Ayurveda explains herbal smoking with proper etiquettes. But an addicted person never follow these etiquettes. Tobacco smoking causes endothelial dysfunctioning, lipid alteration & platelet activation leading to clot & embolism formation. Thus affecting *Ojovahi Dhamani* & heart -site of *Oja*, thus distracts the *Oja*.

Various toxins in tobacco affects sperm motility, sperm count and sperm morphology causing *Shukranash*. Maternal tobacco use also leads to abortion, foetal death etc. Chromosomal damage is higher in tobacco users. Nicotine reduces O₂ delivery and blood supply to foetus & placenta affecting brain function & organ development. Thus tobacco affects all three major functions of *Oja* in foetal life.

Tobacco smoke induces irritation, inflammation, swelling and narrowing of airways leading to obstruction of airflow. Thus function of *Oja* "*Sarv Cheshitasu Apratighat*"⁷⁶ is hampered. Tobacco smoke also decreases immune defense & increases susceptibility to Pulmonary Koch's by damaging respiratory mucosa. This offsets the fundamental function of *Oja* i.e. '*Nibandhanam*' guarding against adverse conditions.

Prolonged use of Nicotine makes human brain use to and dependant on nicotin to function normally. An addicted person feels symptoms of nicotin withdrawal when he discontinues or reduces tobacco use. These symptoms include all symptoms that are explained under *Ojakshaya* by *Charaka* like – *Bhaya*, *Dourbalya Dhyayati*, *Vyathit Indriyatwa*, *Durmana*.

DNA is the cell's "instruction manual" that controls a cell's normal growth and function. Harmful chemicals of tobacco smoke damage a cell's DNA which controls growth & function of cell. When a DNA is damaged, a cell grows without control and create a cancer tumor. Thus tobacco affects important administrative "*Sarvavyavasthapaktven*" function of *Oja*.

Conclusion:

Oja is present the body right from *Shukra*, *Shonit* and *Jivatma* union. It works as administrator in all body function like organogenesis, homeostasis etc. Tobacco despite of its medicinal benefits poses enormous threat to public health. Excess and improper use of tobacco exerts a negative effect on *Oja*. *Oja Kshay* in tobacco user leads to various disease leading to decreased quality of life . This can be stopped by preventing tobacco use and following *Ojovardhak* diet, *Yoga*, *Meditation* and *Sadvrutta*.

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