

## “DHOOPANA” VIS-À-VIS FUMIGATION: THE MEASURE FOR PREVENTION OF INFECTIOUS DISEASES

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### ABSTRACT

The group of infectious diseases that spread from one person to another through air is termed as “air-borne diseases”. In this case the disease causing agents (organisms like bacteria, virus etc.) first cause pollution of air. Then, since inhalation of air is must for each and every individual, they enter into the respiratory tract and from there spread their effect to the whole body. In modern medical science, for prevention of such diseases “fumigation” is opted in large scale. As a tradition at the very beginning of the rainy season fumigation with mosquito destroyers is done to kill the mosquito which are the vector of malaria, chikungunia, danguie etc. Ayurveda, the well accepted health science of India serving for the mankind selflessly since time immemorial, deals with all types of diseases/conditions that can cause disturbance in peace of the living beings (not only of the human but also of the animal kingdom). The Ayurvedic scholars classify the diseases into two main groups – (1)Nija (that occurs due to disturbance in the normalcy of the body humours viz. Vata, Pitta and Kafa) and (2)Agantuja (that occurs due to invasion of the external agents leading to disturbance in the normalcy of the body humours ). For the “Nija roga” the treatment procedure is mentioned by the authors in detail. But for the “Agantuja roga” there are some additions in the treatment procedure. As the Agantuja roga is considered to occur due to invasion of “krimi (worms)”, “bhuta”, “rakshasa(two examples of invisible harmful agents)” etc. it is said to be mandatory to think about the surrounding environment of the patient. As the direction suggest purification of air is most important to protect the patient from the attack of the external agents as mentioned. “Dhoomaprayoga” or “Dhoopana” (use of smoke by burning some substances) is considered as the most important and beneficial method for purification of air by the Ayurvedic authors. Since even now the human society is facing the problem of spread of disease through air hence the need of discussion, evaluation and application of the process “ Dhoopana”, as mentioned in the Ayurvedic classics, can be considered as the need of the hour. Drawing attention to the concept of application of medicated smoke may be proved to be beneficial for the human society even now, at the time of “CORONA VIRUS OUTBREAK”.

**KEYWORDS:** Fumigation, dhoopana, nija and agantuja roga, invasion of external agents, CORONA VIRUS outbreak.

### INTRODUCTION

Air borne diseases are not new for the human society. As revealed by the scholars it is well accepted that, there are innumerable number of living organisms in the environment that are waiting for chance to enter into the human body. Once they can enter into the body make selter in appropriate part and remain in search of scope to cause disease. This scope is nothing but the weakness (reduced resistance) of the person which is described in the Ayurvedic classics as imbalance of the three body humours (Vata, Pitta and Kafa).

To make the situation of polluted environment (mainly air) easy to understand the Ayurvedic scholars mention “DUSHITA VAYULAKSHANA AND IT’S SHODHANA” in different references. An impressive discussion on the signs and symptoms of the effect of the polluted air, treatment and measures to be taken for purification of such environment is available in the classics. One such measure mentioned in the Ayurvedic classics is “DHOOPANA”.

The modern medical science discuss many disease to be air borne and also advise the measures for purification of polluted air. Special attention is paid by the modern

medical science on the process “**Fumigation**” specially to kill the vectors like mosquito (in the situation of outbreak of Japanese encephalitis, Dangu, Malaria, Chikungunia etc). No stress is given on application of fumigation to prevent the outbreak of bacterial, viral diseases.

In the indication of “**Dhoopanakarma**” the Ayurvedic scholars mention the conditions like “**Bishadooshita Vayu**” (the condition when there is pollution of air due to natural or human activities). Even in the situations when poison is sprayed in the air by the enemies to cause disease of the opposition army (chemical warfare) also advised to be dealt with application of medicated smoke.

A discussion on the use of medicated smoke as advised by the Ayurvedic scholars for purification of air / prevention of air borne diseases will definitely be accepted as the demand of the time.

**Aim of the Study:-** The present one is a literary study conducted with the following aims –

1. To find out any idea /condition mentioned in the Ayurvedic classics that are similar to the modern concept of infectious organisms (diseases)
2. To search for the concept of air pollution and air borne diseases in the Ayurvedic classics
3. To develop a concept on the modern and Ayurvedic concepts on air pollution/air borne diseases
4. To study about the methods of air purification mentioned in the Ayurvedic classics with special reference to dhoopana (application of medicated smoke)
5. Ultimately to arrange the findings of the study in the form of a scientific article for appraisal of the scientific society.

## MATERIALS AND METHODS

The study was conducted at the Central Library, Govt. Ayurvedic College, Guwahati, Assam, India. The available Ayurvedic classics were studied to gather information related to the aims of the study. Modern information on the topic was collected mainly from internate. The findings were organized according to the aim of the study and ultimately the form of a scientific article is given for appraisal of the learned society.

## OBSERVATION AND RESULT

From the study the following observations are made

(1)In relation to Shalyakarma (Surgery) the surgeons are advised to collect all the necessary equipments etc. and then the surgery should be performed accordingly in proper way. After completion of the surgery cleaning, application of medicines, bandaging etc. should be done and the patient should be kept in observation. At this state there is fear of attack of the “**RAKSHA**”(a group of invisible harmful agets). The patient is advised to protect from them and for the purpose “**DHOOPANA**” is advised. The drugs advised to use for the purpose are –

Guggulu (Balsamodendron Mukul), Aguru(Aquilaria Agallocha), Sarjarasa (Mimosa Rubicaulis), Vacha (Zingiber Zerumber), Gaurasarsapa (Brassica Camprestris), Lavana (Salt), Nimbapatra(Leaf of Azadiracta Indica) and Ghrita (Ghee).<sup>[1]</sup>

(2)The **branita purusha** (individual who got injury due to operatin)is advised to protect with great caution as during shastrakarma (operation) the patient gets injury and at this state there is fear from the strong Rakshasa and also the followers of Rudra, Kubera and Kartikeya(some names given to some harmful invisible disease causing agents specially after operation entering through the surgical wound) who always remain in lust of mamsa (meat) and rakta (blood) moves in search of their food and sometimes they even cause death of the patient. To protect the patient from their harmful attack the physician is advised to use Dhooa (applicationof smoke), Boli (sacrifice), Upahara (offering) and Bhakshya dravya (food) accordingly. For Dhooma the drugs like Sarshapa (Brassica Camprestris), Aristapatra (Nimbapatra)(Leaf of Azadirecta Indica), Sarpi (Ghee) and Lavana (Salt) are advised to use. It is advised that, the Dhooma should be given twice daily for 10 days continuously.<sup>[2]</sup>

(3)After operation, mentioning the different therapies to be given for the benefit of the patient, a group of drugs are mentioned for “**Branadhoopana**” that contains Srivestaka(Gomeopal Sandazack), Sarjarasa (Mimosa Rubicaulis), Sarala(Pinus Longifolia) and Devadaru (Cedrus Deodara). The brana is advised to expose to the smoke made by burning the mentioned drugs which will help in proper healing.<sup>[3]</sup>

(4)When Vayu becomes polluted (poisoned) the individuals in exposure develop Kasa (cough), Pratisyaya (rhinorrhoea and sneez), Shiroruja (headache), Tibra Nayanamaya (severe type of eye diseases )etc. and at this situation, for purification of air, the smoke of Laksha (Shell Lac), Haridra (Curcuma Longa), Ativisha (Tamalapatra) (Aconitum Heterophyllum), Harenuka (Piper Aurantiacum), Eladala (Amomum Aromaticum), Kustha (Sausurea Lappa), Priyangu (Aglaiia Roxburghianna)etc. should be used.<sup>[4]</sup>

(5)In Bishama Jwara (fever with irregular character) smoke of Aja-Abi charma, Roma (skin and hair of goat and sheep) with Vacha(Zingiber Zerumber), Kustha (Sausurea Lappa), Palankasha (Balsamodendron Mukul) and Nimbapatra (Leaf of Azadirecta Indica), all in equal quantity with small quantity of Madhu(honey) should be burnt. This smoke is said to be “**Bishama jwaraghna**”(helps in cure of the irregular fever).<sup>[5]</sup>

(6)In Bishama jwara just at the beginning of chill and rigor of the patient the smoke of Bidalasakrit (stool of cat) should be applied that prevents the rise of temperature.<sup>[6]</sup>

(7) In case of Grahavesha (invasion of unknown spirits that cause disease of the individual) a smoke prepared by burning the Aja-Riksha charma and Roma (skin and hair of goat and bear), Ullukaroma (hair of owl) with Hingu (Ferula Foetida) and Bastamutra (goat urine) is advised to use.<sup>[7]</sup>

(8) A group of drug is mentioned giving the nomenclature "Bishaghna Dhoopa" (anti poisonous smoke) that contains Jatu (Shell Lac), Sarjarasa (Mimosa Rubicaulis), Ushira (Vetiveria Zizanioides), Sarshapa (Brassica Camprestris), Patra (Cinamomam Tamala), Balaka (Hriversa) (Pavonia Odorata), Bella (Vidanga/Marich) (Embelica Ribes), Arushkara (Semecarpus Anacardium), Pura (Guggulu) (Balsamodendron Mukul) and Arjoonakusuma (Flower of Terminalia Arjuna). It is said that, if this dhooma is applied in the residence neither Sthavara nor Jangama Bisha (poison of inanimate and animate origin) can be able to effect there. All the Bishakta Kita (poisonous insects), Undura (rodents), Sarpa (snake) will also leave the place. Even this dhoopa can prevent the "Kriya" (harmful acts of the wicked persons).<sup>[8]</sup>

(9) The word "Fumigation" means and indicates the action or process of disinfection or purification of an area with fumes of certain chemicals. Commonly it is used as a method of pest control that completely fills an area with gaseous pesticides or fumigants. It suffocates or causes poisoning of the pests in the area. The fumigants are toxic to humans as well as to the insects. Different chemicals are used for fumigation. Exposure to the fumigants can cause some harm to the individual exposed. Therefore utmost precaution is needed when fumigation is done in a residential area.

In medical field, for killing of micro-organisms and prevent microbial growth in air, surface of walls, floor etc. in the pharmaceuticals, operation theatres, hospitals, hotels, office etc. gaseous sterilization is used.<sup>[9]</sup>

## DISCUSSION

From the observations of the study the following points can be considered for discussion

1. The terms "**fumigation**" and "**dhooma or dhoopaprayoga**" can be considered as synonymous. Because in both the situations smoke is used for a specific purpose i.e. purification of air/ disinfection of substances. But the basic difference between these two procedures is – "in fumigation chemical smokes are used where there is no use of fire". On the other hand "in dhoopana some drugs are burnt to produce smoke. In this process there is direct use of fire".
2. The modern concept of application of fumigation is "to kill the unwanted living organisms residing in a specified area/ on some substances". As described by the Ayurvedic scholars the use of dhooma is to purify air/ destruction of the harmful agents like Bhuta, Rakshasa (invisible harmful agents) etc.

3. In both the concepts it is accepted that, the application of fumigation/dhooma is to protect the human society from some diseases caused by the organisms that reside and move in the air.
4. As in the modern technique chemicals are used for fumigation hence there is more fear and chance of harm to the exposed persons. There is need of utmost precaution to be taken by the person who gets exposure to the fume directly or indirectly. But in application of Ayurvedic dhooma, as all are natural ingredients (plant origin) hence the fear of harm to the exposed persons can be considered to be zero.
5. The Dhoopana dravyas advised in the Ayurvedic classics are - Guggulu, Aguru, Sarjarasa, Vacha, Gaurasarsapa, Lavana, Nimbapatra, Ghee, Srivestaka, Sarala, Devadaru, Laksha, Haridra, Ativisha (Tamalapatra), Abhayabda, Harenuka, Eladala, Kustha, Priyangu, Ushira, Patra, Balaka (Hriversa), Bella (Vidanga/Marich), Arushkara, Arjoonakusuma. It can easily be observed that all have medicinal value and therefore their safety as smoke can also be assumed easily.
6. Though in some references the Ayurvedic scholars have mentioned some substances like faeces of cat, skin and hair of goat, bear etc. to be used as dhoopana dravya but as these are very difficult to collect and also some of them are excreta of animals hence their use cannot be advocated without further study of efficacy, safety profile etc.

## SUMMARY AND CONCLUSION

As summary of the study the following points can be mentioned

1. Fumigation is a procedure that is beneficial for disinfection of the air, soil and even of the surfaces of the different substances. Both the Ayurvedic and Modern science admit the utility and benefit of the procedure.
2. The concept of use of fumigation (dhoopana) is widely discussed by the Ayurvedic scholars. The idea of use of the smoke of some selected drugs is not different from the concept of fumigation of the Modern Medical science.
3. The procedure of Ayurvedic fumigation (dhoopana) can be assumed to be safer, less cost effective and useful even in the small families without any fear of harmful effect to the exposed individuals.
4. Even in the present "COVID -19" outbreak use of Ayurvedic smokes for disinfection of large area can be tried and praisable benefit can be expected. The families can be suggested to use the smoke prepared from one or more drugs advised in the Ayurvedic classics at least once in a day by spending 30 minutes (approx) and the benefit can be assessed by doing a survey (or by applying any other statistical test for benefit evaluation).

As conclusion it can be said and expected that, the Ayurvedic principles may be proved to be more

beneficial for the human society if used with trust and good faith. Scientific evaluation of each and every Ayurvedic principle can be considered as the demand of the hour. Multi disciplinary effort in this direction will definitely be able to show new path to the human society in the direction of positive health.

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