



Review Article

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CONCEPTUAL STUDY ON HERBAL FUMIGATION: A REVIEW

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ABSTRACT

Ayurveda the ancient system of medicine has given importance to both preventive care and curative modalities. These have been addressed in the form of Ashtanga Ayurveda (8 branches of Ayurveda) among which Shalya Tantra (Surgery) is one. In Shalya Tantra, various Surgical and Parasurgical procedures have been explained, including their Poorva karma (pre-operative), Pradhana karma (operative) and Paschath karma (post-operative). Though it is the operative procedure that is mainly highlighted, equal importance has been given to both poorva karma and paschath karma, among this comes Dhoopana (fumigation). Fumigation is a process of disinfecting/purifying an area with fumes of certain chemicals or herbs. Most dhoopana drugs contains volatile or aromatic oil which have action like Anti-microbial and bactericidal. It is also an important component of Rakshavidhi that highly resembles the fumigation method of contemporary science and ensures protection against microbes.

Keywords: Dhoopana, Rakshoghna vidhi, Fumigation, Anti-microbial.

INTRODUCTION

There are 100 trillion microbes in human body and millions of microbes around us in air, cloths etc. In the body, these microbes are present in different parts such as skin, nasal cavity, oral cavity, gut and vagina and therefore stay in different habitats. It contributes to almost 37 % of our house hold dusts. In infected parts of human body commonly found pathogenic organisms are gram positive organisms such as *Staphylococcus aureus*, *Pseudomonas aeruginosa*, *Escherichia coli* etc. Gram positive *Staphylococcus aureus* lives in nostrils of 30 % of population.¹ Since ancient times, naturally occurring plants have played an important role in disinfection.

In Vedic literature, there are references of Homa-havana and Yajna, sterilization of air by Agnihotra, sterilization of house and place around it by Dhoopana. In Ayurveda, Acharya Sushruta was the pioneer in surgery. In his work, Sushruta Samhita there is description to do dhoopana with Rakshoghna Dravyas². He has stated many combinations and different types of Dhoopa for different types of organisms. Ayurveda recommends fumigation (Dhoopana) as a method of sterilization for various chambers like Shastragara, Kumaragara, Sutikagara and for instruments like Yantra and Shastras, sterilization methods are Payana, Dhoopana, Parisheka, Agnitapana etc. Sushruta has also explained the method of treating Vrana, Vranitaagara and Shastrakarmagruha by this method of Dhoopana.

Nirukti of dhoopana

Dhoopayatisvagandhenapranayithvaadeepyathiithi |
Gandhadravavyavisheshothhadhoomasthadvarthishcha |
Fumigants are the materials which fumigate the area with its typical odour when ignited.
Dhoopayathisandhukshayathi vanhimithi³
When Varthi is ignited with fire gives its odour containing smoke.

Types of Dhoopana

According to Kashyapa, Dhoopana is of 3 types⁴

1. Dhoopa (Fumigation)
2. Anudhoopa (Subsequent Fumigation)
3. Pratiidhoopa (Anti fumigation)

On the basis of origin, fumigation can also be classified as⁵

1. Jangama and Sthavara.
2. Acharya Charaka has classified dhoopa according to their pharmacokinetic properties in wound management in Vrana Chikitsa.⁶
3. Vrana Kathinyakara Dhoopa and Vrana Mridutakaraka Dhoopa.

Karmukata of Dhoopana

1. Healing Vrana, Yonivyapath, Karna Rogas.
2. Disinfecting Bhesajagara, Vranagara, Soothikagara, Kumaragara
3. Sterilising Asavas and Aristas.

Acharya Sushruta explains about dhoopana with guggulu, agaru, sarjarasa, vacha, gourasarshapa, saindavalavana, nimbapatra, ghrita for shastragara as a poorvakarma vidhi⁷. This shows that dhoopana is one of the aseptic measures. In Ashtanga Sangraha, there is description of Dhoopanain Rakshavidhi. Also there is advice of Dhoopana to the Sutikaagara with the help of Dravyas mentioned in Vrana Chikitsa⁸, Acharya Kashyapa has given separate Dhoomakalpaadyaya for Dhoopana, with the aim of keeping Sutika and the new born healthy. He has described different Dhoopas and in Garbhaavastha, he has advised Dhoopana of bed, clothes, chair and whole Sutikagruha. It shows

that Dhoopana is helpful in disinfecting environment of certain area.⁹

DISCUSSION

“Rakshogna karma” described in Ayurvedic literatures have correlations to the aseptic and disinfectant procedures of modern science. Fumigation is the procedure which is told as Dhoopana Karma. The concept of Rakshasa and Bhoota are closely linked in ayurveda. In contemporary view, this can be compared to infectious agents. The use of dhoopana and importance given to Rakshognavidhi (like fumigations) in classics reveals the scientific sense of ancient scholars regarding infections, also the drugs told by Sushruta in Rakshogna Vidhi are proven to be antimicrobial. Shastragara is the place where Sushruta told to conduct all operative procedures. Without the aseptic measures one cannot become successful in surgeries, for which he told many measures like Prakshalana, Agnitapana for yantras and shastras, Dhoopana karma for Shastragara and Vranithagara. Thus care for maintaining aseptic measures were given since that time.

Fumigation is the process by which we can sterilize the enclosed area by injecting the chemicals which will kill or destroy microbes present in the air. By maintaining sterile environment a major part of exogenous infections can be controlled. Fumigation of hospital rooms with high concentration of toxic chemicals has been proposed to reduce microbial agents on hospital surfaces and to control infections¹⁰. Disadvantages of chemical fumigation are respiratory irritation, itchy eyes, runny or stuffy nose, sore throat and headache. Generally formaldehyde is used for OT fumigation. Formaldehyde can cause breathing difficulty in allergic individuals, particularly those with asthma or another respiratory condition. In humans, formaldehyde exposure has been associated with cancers of the lung, naso pharynx and nasal passages. Health effects resulting from certain fumigations may include neurological signs and respiratory damage¹¹.

So it is necessary to establish an Ayurvedic method of fumigation, because ayurvedic drugs are equally potent to kill the microorganisms. With the herbal fumigation several hours of operation theatre closure is not necessary like in chemical fumigation and it also don't cause the side effects as in the contemporary method of fumigation.

CONCLUSION

Usage of herbal fumigation has been a common practice in Vedic rituals. As per Vedas “surya and agni are effective agents to destroy Krimi and Rakshasas (the visible and invisible organisms) that causes disease. “Rakshogha karma” described in ayurvedic literatures have correlations to the aseptic and disinfectant procedures of modern science.

In Ayurvedic practice, it is need of the hour to standardise the Classical method of fumigation for sterilization. The drugs mentioned by Acharya Sushruta are proved to be antibacterial and antimicrobial and thus definitely provides disinfection and are an effective alternative to the contemporary method of fumigation.

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