STUDY OF EFFICACY OF NIMBAPATRADI VRANADHOOPAN IN TREATMENT OF DUSHTA VRANA.

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ABSTRACT

It is necessary to interpret the idea and principle stated in Ayurvedic texts with today’s advanced techniques. Krimi is the main cause in Vranadusti. To get prevention from krimi; Sushruta has explained Dhoopana method in treating Vrana. Vranadhoopan (fumigation) of medicinal herbs has been prescribed in Ayurveda. Due to Vranadhoopan wound is protected from formation of maggots (Krimighna), bacteria (Rakshoghna). Destruction or damage of a tissue in a particular part of body is called Vrana. In text Yogaratnakara, various Dhoopana drugs are mentioned viz. Nimbatra, Vacha, Hinga, Sarpi, Saindhava etc. These drugs are Krimighna, Rujahara, Rakshoghna, Kanduhara and Vranaropaka. Use of broad-spectrum antibiotics by modern science helps to prevent infections but there are many strains of bacteria which have developed resistance against many of them. Comparatively Vranadhoopan is cheap and safe and said to be effective in Vranaropan. Hence it was decided to verify and revalidate these facts under this project “Study of efficacy of Nimbatradi Vranadhoopan in treatment of Dushta Vrana.” 50 patients suffering from Dushta vrana were selected. Vranadhoopan procedure was done twice in a day morning and evening for seven days. Vrana, Strava, Vedana and Gandhi were assessment criteria. Nimbatradi dhoopana was effective in Dushta vrana due to Mahabhut pradhanya, Guna and Prabhava. There was significant difference in score of parameters Vedana, Strava, Varna and Gandhi before and after treatment by Nimbatradi vranadhoopan. The results found with Nimbatradi vranadhoopan are encouraging and it can be used routine management of Dushta vrana.

Keywords: Dushta vrana, Nimbatradi yoga, Vranadhoopan, Infected wound.

1. INTRODUCTION

Ayurveda is praised as ‘Shshwata, Aaa-di and Swabhava sansiddha’ by Acharya Charaka.1 Universal acceptance of one of the most ancient science of medicine has increased in last few decades, but it is necessary to interpret the idea and principle stated in Ayurvedic texts with today’s advanced techniques. Ayurveda is full of real experience, observations and formulae reflecting a combination of inspiration, intuition, facts and results. The formulations quoted in ancient Samhitas do not require research but revalidation for which the basic of Ayurveda Science needs to be kept in mind which concentrates more on prevention rather than cure. Krimi2 is the main cause in Vranadusti. Pain, discharge, bad odour etc. are caused by Krimi in Dushta vrana. as well as krimi are the causes of various diseases. To get prevention from krimi; Vranadhoopan3 (fumigation) of medicinal herbs has been prescribed in Ayurveda. This fumigation is to be done twice in a day morning and evening for seven days. Vrana, Strava, Vedana and Gandhi were assessment criteria. Nimbatradi dhoopana was effective in Dushta vrana due to Mahabhut pradhanya, Guna and Prabhava. There was significant difference in score of parameters Vedana, Strava, Varna and Gandhi before and after treatment by Nimbatradi vranadhoopan. The results found with Nimbatradi vranadhoopan are encouraging and it can be used routine management of Dushta vrana.

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2. METHODS

Vranadhoopan and revalidate these facts under this project Vranaropan and safe and said to be effective in biotic management, as well as renal impairment. Compared to antibiotics needs to be kept in mind like gastri-

tics, headache, dizziness, skin rashes and hepatic

Every second month we come across newer developed resistance against many of them.

There are many strains of bacteria which have modern science helps to prevent infections but

and

Vrana.

Hence it is vrana. Since Vedic period by Homahavana, Yadnya etc. sterilization of air was done and by Agnihotra sterilization of house was done. These procedures resemble with concept of Dhoopana. Sushruta has explained this method in treating Vrana. Here Sushruta has told about 'Rakshasas', which might be indicating Krimi or Jantu. In Rigveda also it is mentioned about Rakshas i.e. Krumi. In text Yogaratnakara, various Dhoopana drugs are mentioned viz. Nimba patra, Vacha, Hingu, Sarpi, Saindhava etc. These drugs are Krimighna, Rujahara, Rakshoghna, Kanduhara and Vranaropaka.

Use of broad-spectrum antibiotics by modern science helps to prevent infections but there are many strains of bacteria which have developed resistance against many of them. Every second month we come across newer antibiotic, but they also meet early resistance to these bacteria, more over the side effects of this antibiotics needs to be kept in mind like gastritis, headache, dizziness, skin rashes and hepatic as well as renal impairment. Compared to antibiotic management, Vranadhoopan is cheap and safe and said to be effective in Vranaropan. Hence it was decided to verify and revalidate these facts under this project “Study of efficacy of Nimbatradi Vranadhoopan in treatment of Dushta Vrana.”

2.1. Objectives

- To study of efficacy of Nimbatradi Vranadhoopan in the management of Dushta Vrana”.
- Study and standardization of herbs used for Dhoopana.
- To standardize SOP of Dhoopana.

2.2. Materials and Dhoopana procedure

2.2.1. Materials

Neemba patra (Azadiracta Indica A. Juss.), Vacha (Acorus calomus Linn.), Hingu (Ferula narthex Boiss.), Saindhav lavana (Cow’s ghee) were used. Authentication and Standardization were done by Pharmacognostic and Physico-chemical methods from expert Taxonomist / Botanist and guideline given by API were followed.

2.2.2 Dhoopana procedure

In what quantity these Dhoopya dravyas are to be taken has not been mentioned in the books. Vagbhata has advised that, drugs should be taken in the equal quantity where proportion is not mentioned. Hence, all above drugs were taken in equal quantity (i.e. 5gm each at a time). All drugs were put on burning coal and allowed them to burn without producing flames.

2.3. Administration of Dhoopana

This Vranadhoopan procedure was done twice in a day morning and evening for seven days without any break. In Pramada Dagadha a condition of Dhoomopahata (suffocation) has been described. Itching of the eyes and redness in the eyes are symptoms and sign amongst them. It means Dhoopana must be stopped before appearing such symptoms. Hence it was considered the criteria for Samyaka dhoopana.

2.4. Study Design

50 patients suffering from Dushta vrana were selected from OPD and IPD, Shalyatantra Dept., MES Ayurveda College Hospital. Selection was done randomly by applying Lottery method. Selection of patients was irrespective of sex, religion, occupation etc. Case record form was used to note down the clinical data.
Written consent was taken as per norms. Ethical clearance was taken from IEC of institute for the study.

2.5. Selection criteria

2.5.1. Inclusion criteria
- Patients having Dushta Vrana were selected.
- Infected wounds
- Patients ready to give written consent were selected.

2.5.2. Exclusion criteria
- Diabetic Wounds
- Malignant ulcers, Osteomyelitis
- Gangrenous wounds.

2.5.3. Withdrawal of subjects
- Occurrence of any serious adverse effect.
- Patients willing to discontinue the treatment during trial.
- Patients absent for follow-ups.
- Withdrawn patients were replaced by patients fulfilling criteria of inclusion.

2.6. Criteria of Assessment

Vrana, Strava, Vedana and Gandha were assessment criteria to observe changes in Dushta vrana. These criteria were graded for ease of assessment. Table No. 1 shows assessment criteria.

2.7. Baseline Screening:
Routine investigations were done, viz. Hb gm%, BSL (R), BSL (F and PP), Elisa for HIV and VDRL, Other Routine investigations as per required.

3. RESULTS

Patients of age group 41 to 60 years were found maximum among all. Males were more as compared to females (Figure 1). Usually males have to work outdoor as compared to females who commonly work indoor. So, chances to get injury, wound and chances to get wound infected are commonly more in males. Workers and housewives with Dushta vrana were most amongst all occupations. Pitta-Pitta prakruti patients were more. Pitta prakruti found more incident in Dushta vrana, which might be due to Pitta-Rakta ashraya ashrayi sambandha (Figure 2).

Before treatment in most of patients, grade three or grade two score of all parameters were present. But after treatment in most of patients, grade zero or grade one score of all parameters were present. It shows that, Vrana, Strava, Gandha and Vedana; all parameters were reduced after Vranadhoopan chikitsa. Changes and comparison (before and after) in grades of parameters is shown in Figure 3 to Figure 6. Statistical analysis was done using Wilcoxon signed Ranks test. Statistical test showed significant difference between BT and AT mean scores of all parameters as value p was less than 0.05 in case of each parameter. Hence it was concluded that, Nimbatradiatori Vranadhoopana has significantly reduced Vrana, Strava, Gandha and Vedana in Dushta vrana patients. Statistical analysis details are shown in Table No. 2.

4. DISCUSSION

The ancient Acharyas know about the spread of infection by Krimi and remedies for killing of them. Hence, many dravyas has been described as Krumighna, Kandughna and Rakshoghna for Krimi chikitsa. Dhoopana dravyas possess the properties like Ruksha, Laghu, Vishada, Sukshma, Krumighna, Rakshoghna etc. Nimbatradiatori dhoopana contains such dravyas. Mode of action of Nimbatradiatori dhoopana can be discussed on the basis of Mahabh pradhanya, Guna and Prabhava.

Mode of action on the basis of Panchabhautikva:

Nimba is Vayu and Akash mahabh pradhan. Also, its Tikta rasa is Vayu and Akash mahabh pradhan. These panchabhautik concentrations are in particular proportion in Nimba and other dravyas. During all the stages of development of drug, the panchabhautik concentration remains in a particular proportion in a state of equilibrium. The Vayu mahabh is Laghu, Shita, Ruksha, Vishad in nature. It pro-
motes the roughness erosion due to vishadatva, laghutva. The Akash mahabhut is Mrudu, Vi-shad in nature. It promotes the softness, porosi-
ty and lightness where ever it present. We can say that mahabhutas which are in highest con-
centration in Nimbapatradi dhooma act on pyo-
genic bacteria. It dries up the intracellular fluid matrices in a bacterial cell by its Pancha-
bhautik concentration and by properties or manabhutas i.e. Ruksa, Anu, Vishad and Lekhan. This mechanism produce disturbance in bacterial cell metabolism and may result in bacterialidal action of dravyas, Nimbapatradi dhooma by inhibiting the growth of bacteria or by killing bacteria acts in Dushta vrana.

**Mode of action on the basis of Guna:**

The Guna (basic properties) are the basic constituent of dravyas by which they carry out functions. The constituents of Nimbapatradi dhooma are having Laghu, Shita, Ruksa, Grahi, Tikshna, Sukshma, Vishada etc. properties. Laghu Guna is helpful in Lekhan (crapping) and Ruksa Guna is helpful in Karshan (making dry). The Shita Guna is helpful in Stambhan (constriction) karma. The Ruksa Guna is helpful for absorbing moisture (Shoshak, Grahi), Kleda (running sticky sub-
stance shodhak and creates dryness. The Vi-
shad Guna is helpful in lekhan and removing kleda in all the above guna Nimbapatradi dhooma show karshan, lekhan, Kledshodhan karma on wound. The Nimbapatradi dhooma acts on bacterial cell wall because of above gunas and karmas. It probably disturbs the mechanism of metabolism of bacterial cell by acting on their cell organelles or it may disturb the specific environment of bacteria in which they grow. In this way the Nimbapatradi dhooma acts by its Guna on pyogenic bacteria in vitro and inhibit the growth of bacteria or kill the bacteria.

**Mode of action on the basis of Prabhava:**

Whenever a drug lodged in body, some-
times the Rasa, sometimes the Guna, some-
times the Virya and sometimes the Prabhava manifest their effect on the individual body. In

the process of dhooma the active constituents of Nimbapatradi i.e. margosine, a bitter alkaloid and sulphur get released and dispersed. Due to these constituents, dhooma may inhibit the growth of bacteria or kill them. Hence, we can say that Nimbapatradi dhooma acts effective-
ly in Dushta vrana by its Prabhava.

**5. CONCLUSION**

- After analysing all the data and the observations, we have concluded that-
- Pitta-Kapha and Vata-Pitta prakruti patients were found more. Pitta prakruti is found dominating in Dushta vrana, because vitiates Pitta also vitiates Rakta dhatu.
- Nimbapatradi vranadhoopana is effective in Dushta vrana.
- There is significant difference in score of parameters Vedana, Strava, Varna and Gandha before and after treatment by Nimbapatradi vranadhoopan.
- The results found with Nimbapatradi vranadhoopana are encouraging and it can be used routine management of Dushta vrana.

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6. TABLES

<table>
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<th>Parameter</th>
<th>Grade</th>
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<td>0</td>
<td>Twaka samanya</td>
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<tr>
<td></td>
<td></td>
<td>1</td>
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<td>More than 6 x 6 cm gauze piece gets wet</td>
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<td>Pain not relieving with analgesics</td>
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<td></td>
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Table No. 1. Shows criteria of assessment

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Table No. 2. Statistical analysis by Wilcoxon test

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Figure No. 1. Age and Sex

Figure No. 2. Prakruti

Figure No. 3. BT–AT changes (Vrana)

Figure No. 4. BT–AT changes (Strava)

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