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A PHARMACEUTICAL REVIEW OF LITERATURE OF NIRGUNDI TAILA WITH SPECIAL REFERENCE TO SNEHA KALPANA

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INTRODUCTION

Ayurveda, the Upaveda of Atharaveda, has emphasized on the principle of protecting the health in a healthy individual and eradicating the disease in the diseased. Living in good health throughout his life has been the dream of man right from day one of his existence on earth. But diseases have regularly disturbed his dream, trying to conquer the healthy state of body, mind and spirit. To overcome the disease, man has developed the art of medicine and science of healing.

Since evolution, man has been a thinking animal. His ability to think and rationalize the knowledge has guided him to both discover and invent innumerable remedies for common and serious ailments from the flora and fauna found around him. Thus herbal and mineral drugs have formed an integral part of his existence. "The body and the mind, both are considered to be the abodes of disease, likewise of well being. The cause of well being is their harmonious and concordant interaction. The cause of disease, psychic or somatic is either erroneous, absent or excessive interaction". The system of Ayurvedic medicine has evolved out of continuous trial and experiences accumulated through many generations. The present generation is in the midst of a global paradigm shift in health care.

Even though Bhaishajya kalpana is not mentioned as one of the Astanga of Ayurveda, it has thrived as an important branch in all the spheres of this science. Bheshaja is one which is ought to be known by Bhishak and from which a Bhishak gets remunerative result is named as Bhaishajya. Bheshaja can be taken in consideration with the threefold application i.e. phamacognistic, pharmaceutical approach and approach of therapeutic management. The Bheshaja in accordance with time and requirement flourished with different modulations. These efforts gave rise to a new branch- Bhaishajya kalpana, an Ayurvedic pharmaceutical science. Bhaishajya kalpana comprises two words- Bhaishajya means drug and kalpana means modification. The kalpana is to be carried out in a proper order to potentiate the therapeutic properties of the drugs. Thus this branch aids the physician to utilize the Bheshaja (drug) in various formulations and forms to derive maximum benefit by subsiding/curing the disease.

Taila Kalpana and Ghrita kalpana form a major part of the formulations mentioned under Sneha kalpana in the various Samhitas and other Ayurvedic formularies. Sneha Kalpana can be used by different modes of administrations like Pana, Abhyanga, Nasya, Basti, Karnapoorana, Tarpana etc. in various diseased conditions of the body. The Sneha present in the formulation acts as both medicine as well as vehicle for the transportation of the active principle of the drug to various parts of the body. The use of Taila kalpana for external use is found mainly in Vata vyadhi. The method of preparation of different Taila kalpanas requires different Drava dravyas and different number of days for the paka. The intention of doing the paka for specific number of days may be for the better transfer of the active principles of the drug into the oil and to increase its potency.

There are five types of Nirgundi taila and two types of Nirgundyadi taila explained in Bharata Bhaishajya Ratnakara, which are used for different therapeutic benefits. In this study, Nirgundi taila as said in Charaka Samhita Chikitsa sthana 28/134 has been prepared as it is a simple preparation where only Nirgundi is used along with Tila taila as the base. The oil was prepared by adding different Drava-dravya viz Ksheera, Swarasa, Takra, Moola rasa, Vrihi dhanya and the Sneha paka was done for the required number of days as said in Vaidyaka Paribasha Pradeepa (3/26, 27) and compared with the base oil i.e. Tila taila. The number 1,2,3,5 & 12 days were selected to complete the oil samples because these numbers have been specifically mentioned in Vaidyaka Paribasha Pradeepa. The intention of the study was to analyze the different prepared samples of Nirgundi taila by various physical and chemical

analyses and to rationalize the fact whether those samples can be completed in reduced number of days, attaining the same chemical values.

MATERIAL AND METHOD

CONCEPTUAL REVIEW

- **HISTORICAL REVIEW**

Taila kalpana is a pharmaceutical preparation coming under the preview of Sneha Kalpana The four Vedas are the first written evidence of knowledge, but there is no reference about Sneha kalpana in the Vedas.

In Brihatrayees, Charaka has mentioned about Sneha in Sutrasthana 13th and about Sneha kalpana in Kalpasthana 12th chap. Acharya Sushruta has described about Snehapana in Chikitsasthana 31st chapter and Vagbata in Kalpasthana 8th chapter.

Many of the formulations told in Chikitsasthana of Brihatrayees to treat different diseases are Taila kalpanas and Ghrita kalpanas. Acharya Charaka has told about 70 taila kalpanas, Acharya Sushruta has told about 30, while Acharya Vagbhata in Astanga Hridaya has told about 40 taila kalpanas.

In Madhava nidana, there is no description regarding Sneha kalpana. Acharya Sarangadhara has explained about Sneha kalpana in detail in Madhyama khanda 9th chap. Acharya Bhava Mishra has described about Sneha kalpana in Uttara khanda 2nd chap. Descriptions about Sneha moorchana are available in Bhaishajya Ratnavali 5thchapter and Vaidyaka Paribhasha Pradeepa Pratama khanda 3rd chapter.

- **Review**

Sneha yonis are two:

i) Sthavara or plant origin like Tila, Eranda Narikela, Sarshapa, Kusumbha etc.
ii) Jangama or animal origin like Goghrita, Mahisha ghrita, Ksheera, Taila from Matsya, Vasa and Majja from animal bones.

Acharya Vagbata mentions Guru, Sheeta, Sara, Snigdha, Manda, Sukshma, Mridu and Drava as the Sneha gunas2. Acharya Charaka has added Picchila to the above said gunas. Sneha is predominated by Prithvi and Jala mahabhoota.

Sarpi, Taila, Vasa and Majja are called Sneha chatustaya, out of which Sarpi is called the 'Shresta sneha', as it absorbs and accepts the properties of other drugs without losing its property during Sneha paka. These four Snehas can be used for Pana, Abhyanga, Nasya, Basti, Karnapoorana etc.

Advantages of Sneha kalpana

- To extract the fat-soluble and water soluble active principles of drugs into the Sneha.
- Enable the medicine to act faster due to quick and faster absorption.
- Medicines reach even the small 'srotas'.
- To preserve the drug/medicine for longer time.

DISCUSSION ON NIRGUNDI TAILA

NIRGUNDI

- **Botanical name**: Vitex negundo Linn.
- **Family** : Verbenaceae
- **Synonyms** : Nirgundi, Ikshurasa, Indranika, Neelika, Shephalika, Sindhuka, Sinduvara, Suvaha

SYSTEMIC CLASSIFICATION

- Kingdom – Plantae
- Sub kingdom – Spermatophyta
- Division – Angiosperma
- Class – Dicotyledonae
- Sub class – Gamopetalae
- Order – Lamiales
- Family – Verbenaceae
- Genus – Vitex
- Species – Negundo

PROPERTIES AND DOSHAGNATA

- Rasa – Tikta, Katu, Kashaya
- Guna – Laghu, Ruksha
- Veerya – Ushna
- Vipak – Katu

- Dosha karma – Vatakapha shama

Morphology

It is a deciduous shrub with thin grey bark. The branchlets underside of leaves or inflorescence is hairy with short grey pubescence. The leaves are 3-5 foliolate; leaflets are lanceolate, 2.5-12. 5cm x 0.7-3.3 cm, the lowest pair is smallest sessile or sub sessile, the middle pair, if present, more or less distinctly petiole, entire or crenate, glabrate, dark green above and pale greenish- tomentose beneath.

The flowers are 5 mm long, bluish purple and are borne in lateral cymes forming an elongated terminal thymus and often compound at the base. The calyx- teeth are triangular. The corolla is bluish or purplish white and 5- lobbed. The stamens are 4, didynamous and excerted. The ovary is 2-4-celled and 4-ovuled. The drupes are succulent and black when ripe. The seeds are obovate or oblong. Stamens are four, didynamous, exserted; filaments hairy at base; anthers are 2-celled. Flowering is during the month of June- August and fruiting is during the cold season.

Occurrence and distribution

It is found in scrub, jungles and road sides in the warmer parts throughout India up to an altitude of 15000 meters, in the outer Himalayas. Plant occurs throughout India in warm regions in wild state. It is also planted in hedge form or hedge rows in villages and as garden hedge. It is found along river beds and stony rivulets. Plant is found in the valleys and lower areas in Uttar Pradesh, hilly region especially in Siwaliks and Terai belts. Throughout India on waste lands up to 1500 m, Srilanka, Afghanistan, Tropical Africa Madagascar, China, Philippines.

Chemical Constituents

Subramaniam and Misra (1978) isolated 2 new leuconathocyanidins I & II from the stem bark as methyl ethers of leucodelphinidin and leucocyanadin-7-0 rhamnoglucoside. P-hydroxybenzoic acid, aniclic acids and luteolin have been reported from the stem bark.

The root contains β-sitosterol, 3-formyl 4, 5-di-methyl-8-oxo-5H-6, 7-dihydronaptho (2, 3-b) furan and acetyl oleanlic acid. The seeds contain β- sitosterol, p-hydroxy benzoic and 5-hydroxyisophthalic acids, linoleic, palmitic, oleic and stearic acids, n- hentriacontane, n-pentatriacontane.

Pharmaceutical study

Collection of raw materials

- Nirgundi (Vitex negundo Linn.), the raw drug needed for the preparation of Nirgundi taila, was collected from the surroundings of Moodabidri and the drug was certified by Botanist before the preparation of the medicine.
- Milk taken for the practical was 'Nandini milk' of 8.5% SNF, obtained from 'Nandini Milk' Products, Kulashekhara, Mangalore.
- Tila taila procured was of highest quality

Equipments: Weighing scale, Measuring jar, Khalva yantra, Vessels, Clean cloth, Spatula, Thermometer.

Ingredients

- Nirgundi patra and moola kalka :1/8th part = 31 gm
- Tila taila :1 part = 250 ml
- Ksheera :4 parts = 1 liter

Procedure

- Nirgundi patra and moola were taken in equal quantity and cleaned properly in water.
- It was then crushed using khalwa yantra to obtain the Kalka.
- Tila taila was taken in a clean vessel and slightly heated.
- Nirgundi kalka was added to the heated oil followed by Ksheera.
- Heating was done over mild fire using gas stove with continuous stirring of the mixture using a spatula to prevent sticking of the Kalka to the bottom of vessel.
- The mixture was heated in mandagni till Taila paka lakshanas were observed.
- The obtained oil was filtered using a clean cloth.
- The oil was stored in a glass jar after complete cooling.

Observation: Table

Sr. No.	Time	Temp	Color of the Paka	Observation	Precaution
1	**30 min.**	80^{o} C	Pale white	Milk started boiling, appearance of small bubbles at the top. Vaporization of milk was seen.	Occasional stirring of the mixture was required.
2	**60 min.**	**100^{0}** C	Pale white	Milk boiled, the mixture became little thicker with appearance of milk cream at the top along with	Stirring was essential to avoid sticking of the Kalka to the

				froth. Vaporization of milk was seen	bottom of the vessel
3	**120 min.**	**110^0** C	Pale yellow	Milk cream broke down into smaller pieces and appeared like wet cotton swabs. Separate layers of oil and milk could be distinguished.	Continuous stirring was done.
4	**180 min.**	**115^0** C	Pale brown	Milk cream broke down completely and disappeared. Kalka could be rolled into Varti	Continuous stirring was done.
5	**210 min.**	**115^0** C	Pale brown	Phenodgama was observed, absence of moisture in the Kalka	The paka was removed from the stove after Paka siddhi lakshanas were observed.

Result: Oil obtained: 220 ml, Oil loss/Gain in %: 12% loss, Total time taken: 3 hrs. 30 min., Color of the oil: Pale brownish black.

Sneha kalpana was secondary preparation derived from both Kashaya kalpana and Kalka kalpana. It is the process where the active principles present in the drug are transferred into the Sneha (Ghee or Oil) after the pharmaceutical process. Taila Kalpana and Ghrita kalpana form a major part of the formulations told under Sneha kalpana in the various Samhitas and other Ayurvedic formulary texts. The Sneha present in the formulation acts as both medicine as well as vehicle for the transportation of the active principle of the drug to various parts of the body. The method of preparation of different Taila kalpanas requires different Drava dravyas and different number of days for the paka. The intention of doing the paka for specific days may be for the better transfer of the active principles of the drug into the oil and its increased potency. Acharya Sharangadhara has mentioned not to complete Guda paka, Taila paka and Ghrita paka in a single day.

REFERENCES

1. Acharya Charaka, Charaka Samhita, Edited by Brahmananda Tripati, Chaukhamba Suratharati Parakashan, Varanasi, 6th edition, 1999.
2. Acharya Harita, Harita Samhita, Edited by Kaviratna Kaliprasad Tripati, Sri Venkateshwara Mudranalaya, Bombay, 1984.
3. Acharya Kashyapa, Kashyapa Samhita, Edited by Pt. Hemaraj Sharma, Chaukamba Sanskrit Samsthan, Varanasi, 4th edition, 1994.

4. Acharya Sharangadhara, Sarangadhara Samhita, “Subodini teekaa”, Edited by Prayagadatta Sharma, Chaukamba Amarabharati Prakashana, Varanasi, 1988.
5. Acharya Susrutha, Sushruta Samhita, Edited by Kaviraj Ambikadatta Shastri, Chaukamba Sanskrit Series, Varanasi, 12th edition, 2001.
6. Acharya Vagbata, Astanga Sangraha, Edited by Ranjit Rai Desai, Baidyanath Ayurved Bhavan Pvt. Ltd. Nagpur, 3rd edition, 1986.
7. Acharya Vagbata, Astanga Hridaya, Commentary by Atridev Gupta, Edited by Yadunanadan Upadyay, Chaukamba Sanskrit Series, Varanasi, 14th edition, 2003.
8. Adhamalla Virachita Deepika Commentary on Sharangadhara Samhita, Edited by Pt. Parashuram Shastri, Chaukamba Orientalia, Varanasi, 5th edition, 2002.
9. Anonymous, Yoga Ratnakara, Vidyotini Commentary by Vd.Lakshmipathi Shastri, Chaukamba Sanskrit Series, Varanasi, 7th edition, 2002.
10. Ayurvedic Formulary of India, Govt. of India, Ministry of Health and Family planning, Dept. of Health, New Delhi, 1st Vol. 1st edition, 1978.
11. CCRAS, Dept. of ISM & H, Ministry of health and family welfare, Govt. of India, Database on Medicinal plants used in Ayurveda, vol.3, 2001, Pg, 450.