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A REVIEW ARTICLE ON MEDICINAL PROPERTIES OF TAMAKHU –AN AYURVEDIC PERSPECTIVE.

Dr Alfiya Shaikh¹ & Dr Manohar Khankhane²

1. PG Scholar, Department of Agadtantra, Sumatibhai Shah Ayurved Mahavidyalay, Hadapsar, Pune.

2. HOD, Department of Agadtantra, Sumatibhai Shah Ayurved Mahavidyalay, Hadapsar, Pune.

ABSTRACT

Herbal plants are considered as the most significant source of medicines. These herbal plants are in practice from ancient times. Traditionally, all the parts of the plant are used for curing various diseases. *Nicotiana tabacum* is one such herbal plant also called as *Tamakhu*. Since ancient times *Tamakhu* is been used for smoking and chewing. Apart from this, the *Tamakhu* plant possesses different therapeutical properties which remain unexplored till date. *Tamakhu* have properties like analgesic, anti-inflammatory, anti-helminthic etc

Keywords: *Tamakhu*, *Nicotiana tabacum*, analgesic, snake bite, *Nux vomica*.



INTRODUCTION

There are so many herbal medicines either individually or in combination which are being used in various medical treatise to cure different ailments. Holistic approach of *Ayurveda* in regard to preventive, promotive and curative measures with due consideration of health and disease is well established. The *Materia Medica* of *Ayurveda* provides a great deal of information on the *Tamakhu* and its Therapeutic uses. The knowledge of *Tamakhu* is scientifically documented and organized in classical texts and various *Nighantus*. *Tamakhu* is an uncommon herb in *Ayurveda* that originated in central South America. It was brought to France by Gin Nicot of Nismas, from which point Spanish traders brought it to the Philippines, from where it travelled to India via China. *Yogaratanakar* mentioned it for the first time. Leaves of *Tamakhu* are used in various ways e.g they are smoked, chewed with *pan* or are mixed with molasses to form *Tamak*.^{[1][2]}

AIM & OBJECTIVES:

A systematic review was conducted with an objective to search and explore the medicinal uses of the plant *Tamakhu*.

MATERIALS & METHODS:

Review of literature regarding *Tamakhu* is collected from Classical *Samhitas* and *Nighantus*. Research articles are also searched from various websites. All Compiled matter is reorganized and critically analysed for the discussion and attempt has been made to draw some fruitful conclusions.

TAXONOMY OF TAMAKHU (*Nicotiana tabacum*)^[3]

Kingdom: Plantae
 Sub kingdom: Viridiplantae
 Division: Tracheophyta
 Class: Magnoliopsida
 Order: Solanales
 Family: Solanaceae
 Genus: *Nicotiana* L
 Species: *Nicotiana tabacum* L.

VERNACULAR NAMES^[1]

Sanskrit: *Tamakhu, Gucha Phala, Tamal*
 Hindi: *Tambaku*
 Marathi: *Tambhakhu*
 Tamil: *Pugailai*
 Telgu: *Pogaku*
 Malayalam: *Puka yila*
 English: *Tobacco*

BOTANICAL DESCRIPTION^[4]

It is an annual plant that grows 1 to 3 m high and is sticky hairy on all parts. The stems are thick and not very branched. **Leaves** can be over 50 cm long with the blades ovate to elliptical, or obovate, pointed towards the front and, at the base, run down the stem or are sessile, encompassing the stem. The **Scented Inflorescences** are multi-branched panicles. The flower stalks are 5 to 15 mm long. The calyx is 12 to 18 mm and is covered with uneven 4 to 8 mm narrow pointed calyx lobes shorter than the calyx tube. **Fruit** is a 1.5 to 2 cm long capsule that is narrowly elliptical to egg-shaped. It can stand out over the calyx or be enclosed by it. The **Seeds** are spherical or broadly elliptical and are up to 0.5 mm long with a wavy networked surface. Almost every

part of the plant **except** the seed contains nicotine. **leaves** contain 2 to 8% nicotine combined as malate or citrate.

CHEMICAL COMPOSITION^[5]

Its main active element is an alkaloid called nicotine which is in the form of a volatile and colorless liquid. In dry leaves it is 1-8% . nornicotine, anatabine, anataline, solanofuran, bombiprenone etc. There are also resins, fats and some organic acids.

PARTS USED- Leaves

AYURVEDIC VIEW ON TAMAKHU:

Various classical texts and *Nighantus* have mentioned *Tamakhu*. *Yogratnakar* was first to mention it. Description of *Tamakhu* according to different classical texts and *Nighantus* in as follows:

1) *Shaligram Nighantu*^[6]

Synonyms- *Tamakhu*, *Kshaarpatra*, *Krumighni* and *Dhumra Patrika*.

Properties- *Pittakara*, *Tikshna*, *Ushna*, *Vasti Vishodhak*, *Madakararak*, *Bhramakararak*, *Tikta*, *Drushti Mandyakar*, *Sara*, *Vamak*, *Katu*, *Ruchya* And *Vatanulomak*. Pacifies *Kapha* and *Vata*, Cure *Kaas*, *Shwas*, *Koshta Vata*, *Krumi Roga*, *Danta Roga*, *Shukra Dosha*, *Drushti Roga*, *Liksha*, *Yuka*, *Vrushika Visha* and *Shotha*.

2) *Mahoshadh Nighantu*^[7]

Synonyms- *Tamakhu*, *Kshaarpatra*, *Krmighni*, *Dhumrapatrika*, *Vajrabrangi*, *Dhumrapatra*, *Sukshupa* and *Tamrakuttoka*.

Properties: *Pittavardhak*, *Ushna*, *Tikshna*, *Vastishodhak*, *Madak*, *Bhramak*, *Tikta*,

Drushtimandyakar, *Sara*, *Vamak*, *Katu*, *Ruchivardhak*, *Deepan*, *Vatanuloman*, *Pacifies Vaat* and *Kapha*, *Cure Kaas*, *Shwas*, *Koshtagat Roga*, *Vaat Roga*, *Krumi*, *Kantha Roga*, *Netra Roga*, *Danta Roga*, *Yuka*, *Liksha*, *Vrushikadi Visha* And *Visha Janya Shotha*.

3) *Raj Nighantu*^[8]

Synonyms: *Dhumapatra*, *Dhumahva*, *Sulabha*, *Syambhu*, *Grudhrapatra*, *Ghrudhrani*, *Krumighni* and *Strimalapaha*.

Properties: *Tikta*, *Shophaghna*, *Krimi Nashak*, *Ushna*, *Kaashar*, *Ruchya* and *Deepan*.

4) *According to Yoga Ratnakar*^[9]

Synonyms: *Dhoomanaka*, *Dhooma Vriksha*, *Bruhatpatra*, *Dhoosara*, *Tamakhu*, *Gucchaphala*, *Dhoomayantra Prakashak*, *Bhubeeja*, *Bahuphala*, *Sookshma Beeja* and *Deerghaka*.

Description: The flower of this plant is similar to flowers of *Patala*.

Properties: The leaves are *Teekshna*, *Ushna*, decreases *Kapha*, *Vata*, *Shwas*, *Kaas* and *Koshta vata*. It expels out *Vata* and cleans the urinary tract. It decreases dental problems, *Krumi*, and *Kandu*. It increases *Mada*, *Pitta* and *Bhrama*. It is *Emetic*, *Purgative*, *Teeksna*, and *Aphrodisiac* and decreases *Eye sight*. It is good remedy for *Vruschika visha*, *Rechana* and *Kapha dosha*

Classification Of Tamakhu In Different Samhitas

<i>Samhita</i>	<i>Varga</i>
<i>Shaligram Nighantu</i>	<i>Parishishta Bhag</i>
<i>Mahoshadh Nighantu</i>	<i>Sammishra Varga</i>
<i>Raj Nighantu</i>	<i>Parpatadi Varga</i>
<i>Yogaratnakar</i>	<i>Faladi Varga</i>

Properties Of Tamakhu^[1]

Sr no		
1	<i>Rasa</i>	<i>Tikta, Katu</i>
2	<i>Guna</i>	<i>Laghu, Tikshna, Vyavayi, Vikasi</i>
4	<i>Veerya</i>	<i>Ushna</i>
5	<i>Vipak</i>	<i>Katu</i>
6	<i>Prabhav</i>	<i>Madak</i>
7	<i>Karma</i>	<i>Kapha Vata Shamak, Pitta Vardhak, Shukrahara, Vastishodhana, Anulomana</i>

SYSTEMIC EFFECTS AND THERAPEUTIC USES OF TAMAKHU^[5]**a) External use**

- i. In rheumatoid arthritis and testicular swelling leaves tied at the site of swelling which relieves the pain.
- ii. By making its powder and rinsing it in toothache and tooth worm, the worm die and the pain of the teeth gets pacified.
- iii. Oil extracted from its leaves is being used for *Abhyanga* in rheumatism.
- iv. Its *nasya* is used in *Kapha Vatik Roga* for *Shirovirechan*. It is analgesic, anti-inflammatory and antihelmentic.

b) Internal

Nervous system: At first it stimulates the nervous system but later causes depression.

Digestive system: In small amount it stimulates the action of secretory glands and muscles which leads to increased salivary secretion and gastric secretion. Due to increased bowel moments gases are passed. It is used as an emetic and thus used in snake bite.

Circulatory system: The heart rate in slow in the beginning for a while but soon it becomes rapid. The pulse rate also increases and the blood pressure also increases. Peripheral blood vessels also become constricted.

- vi. **Respiratory system:** In small doses it stimulates respiration, but when given in large quantities it leads to respiratory arrest. Used as an emetic thus used in cough and breathing problems.
- vii. **Excretory system:** It increases amount of ADH which leads to decreased urine output
- viii. **Reproductive system:** It stimulates uterine muscles which may lead to miscarriage or pre term delivery during pregnancy.

c) *Satmikaran*

- i. It is best antidote for snake poison and *Nuxvomica*.
- ii. Excessive consumption can cause decreased appetite, cough, mental depression, insomnia, weakness, anemia, vision problems and spleen problems.

CONTRAINDICATION

Due to adverse effects it is contraindicated in blood pressure, heart diseases, acidity and pleural effusion.

TOXICITY AND ITS TREATMENT:

- i. If taken orally in overdose, there is severe burning sensation in the mouth, throat and stomach, salivation, vomiting and diarrhoea.
- ii. Person gets excited and his breathing quickens. This is followed by a state of depression, the pulse intensifies, imbalance occurs and breathing becomes shallow and slow.
- iii. Consciousness gradually decreases and death occurs due to asphyxiation and respiratory depression.

For its prevention, stomach wash is done and by relying on the methods of artificial respiration, assistance is provided in respiration.

- v. In addition, cardiac medicine is given.
- vi. Lemon is also beneficial in removing mild intoxication. Suck lemon juice or drink its juice mixed with water. Afterwards use cow's milk, it cures dryness, *Tikshnata* gives peace to the patient.

DISCUSSION:

Herbal plants are used in Indian for treating and curing various disease because of their high value. Medicinal properties of *Tamakhu* are yet to be explored and brought in practice. It is reported in various *Ayurvedic Nighantus* that *Tamakhu* plant contains therapeutical properties including analgesic, anti-inflammatory, antihelmintic, emetic, abortifacient and Antidotal activity. Medicinal use of *Tamakhu* in various diseases and conditions as mentioned in *ayurvedic* text could be beneficial.

CONCLUSION:

The plant *Tamakhu* is well known toxic drug to very limited use has been done by the present medical field. So it is needful to explore the traditional and good uses of the plant. This article tried to explore the traditional uses of plant.

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