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ROLE OF GILOY (GUDUCHI) IN KITABH KUSHATH (PSORIASIS)

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ABSTRACTS

Number of skin disease increased markedly nowadays because of changed work culture, heavy workload, faulty food habits, lack of exercise, & changing life style & increasing pollution. Psoriasis is one the most dreadful dermatological condition. All the skin diseases in *Ayurveda* have been discussed under the broad heading of *"Kustha".* Psoriasis is a proliferative autoimmune skin disease which is affecting 2% of worldwide population. This disease characterised by scaling, thickened-rough skin lesions, itching, in severe cases covers entire body. Modern medical science treats psoriasis with Psoralen and Ultraviolet therapy (PUVA). But the disease has high recurrence rate and the modern medications have serious side effects like liver failure, renal failure, and bone marrow depletion etc. Here, *Ayurveda* treatment is under taken to provide safe and effective remedy for psoriasis. *Kitibha kustha* is considered as one of the *Kshudra Kustha. Tinospora cordifolia* (Guduchi or Amrita) is an important drug of Ayurvedic System of Medicine and mentioned in various classical texts for the treatment of diseases such as jaundice, fever, diabetes and skin disease etc.

KEYWORDS: Kitabha Kushath, Kshudra, Guduchi.

AIM AND OBJECTIVE

Aim- Aim is to review role of giloy (gudduchi) in kitabha kushath

Objective

1. To review literature of kitabh kushath.
2. To review role of giloy in kitabh kushath.

INTRODUCTION

Ayurveda has given some codes and conducts of life which everyone should follow to be healthy physically and mentally, but nowadays life style is changed. Now we are in 21st century, people have changed their life style as per so called western life style. These all factors play important role in *Raktadushti* and *Dosha Vrudhhi*, Which leads to skin diseases especially *Kustha*. Among all skin diseases, 'Psoriasis' is a very distressing disease both for the patients and physicians because of its pathogenic mechanism. All the skin diseases in *Ayurveda* have been discussed under the broad heading of *"Kustha".* Which are further divided into *Mahakustha* and *Ksudra Kustha*. *Kitibha kustha* is considered as one of the *Kshudra Kustha.*[1]

Ayurvedic classics have considered each type of *Kustha* to be a *Tridosaja* manifestation. Their Doshik identity can be established on the basis of dominance of *Dosha* in the *Samprapti*. Thus *Kitibhakustha* is *Vata-Kaphaja*.[2] phenomenon.

This disease characterised by brownish coloured scaling, thickened-rough skin lesions, in severe cases covers entirebody. As per *Ayurveda*, these symptoms are closely similar to symptoms of *Kitibhakushtha*, as its symptoms are *Shyavam, Kinakaraspharsha* and Parusha.[3] closely resembles with symptoms of Psoriasis.

Kustha

1. *Charaka Samhita:* *Acharya Charaka* has described the *Kushtha* in detail with long range of skin diseases with their etiology, Pathogenesis & specific classification under the heading of *Kushtha. Acharya Charaka* has mentioned eighteentypes of *Kushtha*.
These have been classified under seven *Maha Kushtha* & *eleven Kshudra Kushtha* in *Nidana & chikitsasthana.*[4]

2. *Sushruta Samhita*: *Acharya Sushruta* clearly described *Anuvamshika (*Hereditary) and *Krimija* (infectious) *Nidanas* as a causative factor for *Kushtha*. *Kushtha* has been also included in list of *Aupasargika Roga*, which may spread From one person to another. In *Nidana sthana Acharya Sushruta* has explained the *Dhatugatatva or Uttarotar dhatupravesha of Kushtha Roga*. The unique concept is also found in *Sushruta* by

giving the two chapters Of treatment (*Chikitsa)* i.e. *Kushtha Chikitsa & Maha Kushtha Chikitsa*.[5]

Table 1: Causes of *Kustha Roga* in Tabular Form.

Acharaja Hetu	*Ca.Sa.*	*Su.Sa*	*A.S*	*.A.H.6*	*M.N. 7*	*B.P8*
Papa Karma	+	+	+	+	+	+
Vipra Guru Tiraskara	+	-	-	+		
Sadhu Ninda	-	-	+	+	-	-
Killing thevirtuous persons.	+	+	-	-		
Use of money& material acquired by unfair means	-	-	+	+	-	-

Laxanas* of *Kitibha

Kitibha type of *kushta* is characterized as follows:

1. It is blackish brown in color;
2. It is rough in touch like a scar tissue; and
3. It is hard to touch.

Kitibhakushta has dry skin; rough, and hard, creating sound on scratching, hard and black. That which is discharging,round, dense, severely itching and oily black is known as *kitibha*.

DRUG REVIEW

Tinospora cordifolia (Guduchi or Amrita) is an important drug of Ayurvedic System of Medicine and mentioned in various classical texts for the treatment of diseases such as jaundice, fever, diabetes and skin disease etc 10.

Botanical name – Tinospora cordifolia Wall.Ex Seringe.

Family: Menispermaceae.

The single drug Guduchi has been used in this trial in powdered form. *Guduchi* (*Tinospora cordifolia*), also known as *amrita,* is one of the most valued herbs in the Ayurvedic pharmacy. Guduchi's role as an adoptogen, a potent herb that increases the body's resistance to stress, anxiety, and illness. The shrub is native to India, and its roots, stems, and leaves are used for healing.

Giloy – medicinal properties –Rasa – Taste – *Kashaya* (Astringent), *Tikta* (Bitter).

Vipaka –Taste conversion after digestion – *Madhura* – sweet.

***Chikitsa* (Principle Treatment of *Kushtha*)**

Acharya Charaka has mentioned that all the *Kushthas* are caused by *Tridosha*, so the Treatment is to be carried out according to the predominance of *Dosha*. The predominately vitiated *Dosha* should betreated.

First and the treatment of the other subordinate *Dosha* should be undertaken afterwards.

The first line of treatment for all diseases is *Nidana Parivarjana*. In our classical text, detail description is available regarding the treatment of *Kushtha*. The principal line of treatment of Kushtha *has* been classified into

Two groups;[9]

1. *Samshodhana Chikitsa*
2. *Samshamana Chikitsa*

Guna – qualities – *Laghu* – Light to digest, *Snigdha* Oily, Unctuous. Veerya – Potency – Ushna – Hot

Effect on Tridosha – *Doshatrayahara* – Balances *Tridoshas* – *Vata*, *Pitta* and *Kapha*.

Amrit contains the bitter, pungent, and astringent tastes. Although it's traditionally used to remove accumulated *Pitta*,*guduchi* can balance all the *doshas*.

Chemical constituents: The stem and leaves contain Tinosporine, Tinosporide, Corditolide, Tinosporin, Tinosporic acid, Corditol & Tinosporol. Berberillin & a crystalline compound have also been reported. Leaves are rich in calcium and phosphorus.

Giloy uses: Guduchi is best to cause astringent effect, promoting digestion, alleviating Vata, Kapha, constipation andRaktapitta (bleeding disorders)

Other uses: *Rasayani, Sangrahini, Balya, Agnideepani, Amahara, Trut hara, Dahahara, Mehahara Kasahara Paunduhara, kamala, Kushta, vatasrajvara Krimihara, Vamihara, Prameha, Shwasa kasa Arsha Krichra, Hrudya, Hrudroga, Chakshushya- Vayasthapana, Vrushya*

" पि बे द्वा षट्पलं सर्पिरभयां वा प्रयो जये त् ।
त्रिफला याः कषा यं वा गुडूच्या रसमे व वा ॥"
- (चरकसं हि ता)
" पि प्पला मधु सं मि क्ष गुडूची स्वरसं पि बे त ।
जी र्णा ज्वर कफ प्लहि का सा रो चक ना शनम् ॥ "
-(भै षज्य रत्ना वली)
" गुडूची कटुका ति क्ता स्वा दुपा का रसा यनी ।
सं ग्रहि णी कषा यो ष्णा लध्वी बल्या ग्नि दी पनी ॥
दो षत्रया मतृ ड्दा हमे हका सां श्व पा ण्डुता म् ।
का मला कुष्ठवा ता स्रज्वरकृमि वमी न्हरे त् ।
प्रमे हश्वा सका सा र्शः कृच्छ्रहृद्रो गवा तनु त् ॥"
-(भा वप्रका श नि घं टू)

Giloy/*guduchi* has a lot of potential ingredients which not only showed physical as well as mental changes in patients, itreduced.

Their stress level too. Giloy/*guduchi* effect on *lakshana* ofpsoriasis/ kitibha i.e. *Daha, kandu* and on haematological criteriaalso.

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"Phytochemical And Physiochemical Analysis Of Udumbar Jal (Sap Of Root Of Ficus racemosa Linn.)"

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Abstract: **Panchavalkala drugs, Ksheere Vrikshas from Kashaya Skanda are one of the important and ancient sources of long lifespan herbs. There was not much data available on** its properties, actions, **formulations,** dose, time of administration and various preparations of these drugs**.** Its mode of action in various shades of human lifestyle is really a matter of research work with lots of scope to revile unknown facts scientifically. Udumbara Jala **is used** in treatment **by Ayurvedic Physicians** & folklore's **with very good results in condition like** Madumeha, upadansha, bhasmak etc., Curiosity to know about the working principals & mode of action in such conditions made the drug more fascinating & interest to explore its pharmacodynamic & pharmacokinetics. The present study deals with collection authentication & standardization of Udumbara jala (*Ficus racemosa* Linn.) & its analytical study (Laboratory study). Udumbara jala was collected from genuine natural source by using Classical method mentioned in the Ayurvdic Texts and was send within 24 hrs for Analysis. Udumbara was authenticated at central research facility, Analytical Laboratory, Belgavi. The sample was authenticated as *Ficus racemosa* Linn (Family: - Moraceae). The findings like presence of Carbohydrates, Proteins, Minerals & absence of Heavy Metals increases the scope for further research, also there was no presence of any Microbial contamination if collected properly.

***Index Terms* – Udumbara Jala, Ayurveda, Dravyaguna, Sap of Root.**

I. INTRODUCTION

Dravyaguna is in-separable branch of Ayurveda which deals with study of such various dravyas, herbs & its properties, actions, dose, time of administration and various preparations of these drugs. Dravyaguna Vigyan has not evolved spontaneously. Through centuries, the science has gradually developed with new experiences and facts getting incorporated, and old principles which could not with stand the test of authenticity, being discarded This science has always been enriched by new validated principles and experimentations and an organized presentation of experiences.

For the treatment part Ayurveda has used infinite dravyas by virtue of intellect and experience to achieve health, happiness and diminish his sorrows. Human beings possessed marked similarity with nature & has tried to make his life happier by using many dravyas as provided by the nature. But human intellect and intellectual efforts never allowed him to be satisfied. Remedies (therapeutic agents) keep on being increasing in pace with ever increasing medical needs.

II. NEED OF STUDY

Panchavalkal drugs were one of the very potent and largely available categories that served the mankind in many ways. Its use in day today life, diet, medicines, spiritual importance in various holy procedures was successfully & authoratively used since ancient times. Its mode of action in various shades of human lifestyle is really a matter of research work with lots of scope to revile unknown facts scientifically. The main reason for selecting this topic was use of medicine by renowned practitioners from field of Ayurveda & folklore's evidence regarding the use of Udumbara Jala in treatment of Madumeha, upadansha, bhasmak etc., the plant Ficus racemosa Linn. have the various pharmalogical activities like antioxidant, cardio-protective, mosquito larvicidal, gastro-protective. Curiosity to know about the working principals & mode of action in such conditions made the drug more fascinating & interest to explore its pharmacodynamic & pharmacokinetics.

As the reference of Udumbara Jala was not found in classical texts but still it is successfully use by traditional Ayurvedic practitioners by the permission of ancient scholars to experiment & use various drugs in various formats after proper study of drug & diseases opens the scope for scientific research & hence the study was chosen as a topic of research, where details regarding its collection methods, properties, tests etc. were studied in detail under the title **"PHYTOCHEMICAL AND PHYSICOCHEMICAL ANALYSIS OF UDUMBARA JALA (SAP OF ROOT OF Ficus racemosa Linn.)"**

III. AIM & OBJECTIVES

AIM: -

The main Aim of study was "To Analyze PHYTOCHEMICAL and PHYSICOCHEMICAL properties of UDUMBARA JALA (SAP of ROOT OF Ficus racemosa Linn.)"

OBJECTIVES: -

While approaching towards the Aim of the study it was necessary to have a watchful vision on various associated parameters regarding the study topic. Objectives were as follows: **Population and Sample** -

1. To collect literary references of Udumbara jala from ancient Ayurvedic texts as well as from recent Ayurvedic texts.
2. To collect references about collection method of Udumbara Jala.
3. To collect, authenticate & standardize self-collected Udumbara Jala.
4. To study – Organoleptic, Phytochemical & Physicochemical properties of Udumbara Jala.

Drug Discreption

Nirukti of Udumbara: -

"EssÉÉ…biÉqÉqoÉUÇ rÉåIÉ CÌiÉ ESÒqoÉU:|"

Udumbara, the plant which infringement / breach the limitations of sky & one which grows high.

Botonical Name: -
Ficus racemosa Linn; **Syn.: -** *Ficus glomerata. Roxb*

Ficus – Old name used by Horaee, Cicaro & others.
racemosa – having an inflorescence with a long undivided axis or glomerata compactly clustered into a round heap or head (Linn.) (Roxb.)

Classification of Udumbara as per Ayurveda: -

i. Cause effect Relationship: - Karya Dravya.
ii. Living/Non-Living: - Chetana Dravya
iii. Constitution: - Vayu, Prithvi, Aap.
iv. Origin: - Audbhida, Vanaspati.
v. Usage: - Aushadi Dravya.
vi. Morphology: - Vruksha.
vii. Life Span: - Bahuvarshayu.
viii. Rasa (BHP): - Madhur, Kashaya.
ix. Vipaka (BHP): - Madhur.
x. Veerya(BHP): - Sheeta.
xi. Action on Dodha (BHP): - Kapha Pittaghna.
xii. Rogaghnata (BHP): - Vranaropaka & Vranasodhaka, Vednasthapan, Daha-prashamana, Raktavikara, Raktapitta, Raktaatisaar.
xiii. Karma (BHP): - Varnya, Stambhana, Mutrasangrahaniya.
xiv. Gana: - Ch. Su - Mutrasangrahaniya, Kashayaskandha;
Su. Su - Nyagrodhadi;
BHP - Panchawalkal, Kshirivruksha

PARTS USED: -
Bark, Fruit, Latex & Root, Kshira, Udumbara Jala (Sap of Root)

I. RESEARCH METHODOLOGY

The present study deals with collection authentication & standardization of Udumbara jala (*Ficus racemosa* Linn.) & its analytical study (Laboratory study). For any drug to be utilized, its safety, quality & efficacy are important parameters that are to be taken into account Udumbara is an ancient drug used by Ayurvedic practitioners from thousands of years in the traditional system of medicines from Vedic era to till date. Safety of the drug is therefore time tested.

To ensure quality & efficacy the study was divided in 3 stages: -

1. Collection of Sample.
2. Quality assurance (Authentification & Standardization).
3. Analytical Study

3.1 Materials

- Udumbara Jala (Sap of Root of *Ficus racemosa*)
- Essential Research Instruments.
- Tools for collection of Udumbara Jala.

3.2 Collection of Udumbara Jala

Udumbara jala was collected from genuine natural source at Kodoli, MAHARASHTRA, INDIA. In the month of April. Method used were adopted keeping in mind the basic principles of drug collection mentioned in Ayurveda, specifically according to Acharya Charak & proper Sangrahana Kala as stated in ancient Ayurvedic texts.

According to "Acharya Charak" –

"iÉåwÉÉÇ zÉÉZÉÉmÉsÉÉzÉqÉÍcÉUmÉëÂRÇû uÉwÉÉïuÉxÉliÉrÉÉåaÉëÉï½Ç,
aÉëÏwqÉå qÉÔsÉÉÌlÉ ÍzÉÍzÉUå uÉÉ zÉÏhÉïmÉëÃRûmÉhÉÉïlÉÉÇ,
zÉUÌS iuÉM MülS¤ÉÏUÉÍhÉ, WåûqÉliÉå xÉÉUÉÍhÉ, rÉjÉiÉÑïmÉÑwmÉTüsÉÍqÉÌiÉ ||"
-cÉ. Mü. 1/10.

As per above stated shloka Udumbara root & Udumbara Jala were collected from genuine source in Grishma Ritu (April & May). After a watchful study from various texts from Ayurveda it was found that collection of roots was described in some texts, but there were no proper guidelines given for collection of Sap of Root. It was discussed with various experts from the field of Dravyaguna, Botany & on field experts & present collection method was finalized for collection.

3.3 The process of collection of Udumbara Jala was as follows

- The species of Udumbara was identified in the surroundings of Kodoli. Tree was inspected properly from all dimensions to rule out any abnormalities.
- Root was identified for collection of samples.
- External roots were not more precise so it was preferred to dig & identify healthy root for collection of samples.
- Soil was dig precautious without causing any harm to the root with approximate dimension of dig whole around 2ft x 2 ft x 2 ft.
- Proper space was available for swift movements and to maintain aseptic precautions to avoid infection of sample, root was washed thoroughly to avoid adulteration of soil & foreign matters.
- After washing the root, a drape paper was placed in a pit & a collecting vessel was kept under the root.
- Section of root was cut and was covered with an 8 fold - clean cotton cloth; cloth was tied with a knot around 2 inches above the dripping tip of root. The whole concept helped in filtration process of sample.
- The whole setup was further covered with drape paper to avoid inputs of adulterations in form of soils, foreign particles, dust etc.
- Sap of root i.e., Udumbara Jala was collected in the vessel after overnight time span.
- Udumbara jala i.e., sap of root was stored in a dry, non-contaminated, plastic container.
- Collected sample was further send to lab investigations within 24 hrs to avoid alteration in properties & readings or various tests of the sample

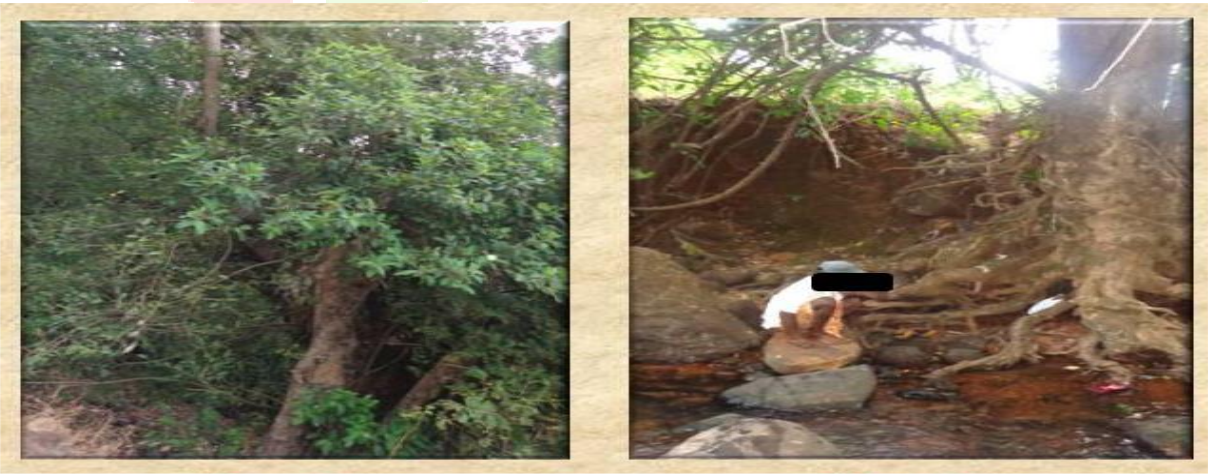

Fig. 01 Udumbara Tree (Ficus racemose Linn.)

Fig. 02 Udumbara Tree with Roots

Fig. 03. Instruments Used for Collection of Sample

Fig. 04. Root of Udumbera Chosen for Study

Fig. 05. Udumbar Root after diging a Pit

Fig. 06. Cutting of Udumbara Root

Fig 07. Selection of Root for Collection Of Udumbara Jala

Fig. 08. Drops of Udumbara Jala Dripping from Root

Fig. 09. Precautions taken to avoid Contamination & Impurities

Fig. 10. Method used for collection of Sample taking aseptic precautions to avoid Contamination at Local Level

3.4 Authentication

Udumbara was authenticated at central research facility, Analytical Laboratory, Belgavi. The sample was authenticated as *Ficus racemosa* Linn (Family: - Moraceae)

3.4.1 Standardization according to API guidelines

Standardization of Udumbara Jala was carried out in following way:-

3.4.1.1 Botanical Standardization

- **Botanical Name**: - *Ficus racemosa* Linn.
- **Family**: - Moraceae.
- **Parts used**: -Udumbara Jala.

3.4.1.2 Organoleptic evaluation

Organoleptic Characters means "Testing with the help of Sense Organs".

- Shape & Size for eyes.
- Surface & Texture with skin.
- Odor with Nose.
- Fracture with eyes, ears & skin.
- Taste with tongue

3.4.2 Physicochemical Analyses

Physicochemical analyses of Udumbara Jala were done with the help of following tests:-

3.4.2.1 Determination of pH value: -

The pH value of a liquid is determined potentiometrically by means of the glass, electrode and a suitable pH meter.

Sample: - Udumbara Jala.

3.4.2.2 Determination of Specific Gravity: -

Specific gravity: The specific gravity of a liquid is the weight of a given volume of the liquid at 250 (unless otherwise specified) compared with the weight of an equal volume of water at the same temperature, all weighing being taken in air**.**

Sample: - Udumbara Jala.

3.4.2.3 Determination of Total Solid: -

Sample: - Udumbara Jala.

3.4.2.4 Determination of Turbidity: -

Sample: - Udumbara Jala.

3.4.2.5 Determination of Refractive Index: -

Sample: - Udumbara Jala.

3.4.2.6 Determination of Chromatography (TLC): -

Sample: - Udumbara Jala.
Materials: - Pre coated TLC plates (silica) of thickness 0.20 mm, 20 x 20 cm, applicator, glass chamber, oven,
Solvent System: - Toluene: Ethyl Acetate: Formic Acid
Spraying agent: - Anisaldehyde Sulphuric acid

3.4.3 Phytochemical Analyses: -

Phytochemical analyses of Udumbara Jala were done by following tests: -

3.4.3.1 Total Carbohydrates: - Estimation of Carbohydrates by Fehling test method:-

Sample: -Udumbara Jala.

3.4.3.2 Test for Proteins: -

Sample: -Udumbara Jala.

3.4.3.3 Estimation of Amino Acids by Ninhydrin method: -

Sample: -Udumbara Jala.

3.4.3.4 Estimation of the Concentration of elements (Calcium, Sodium, Potassium) by Flame photometer: -

Sample: -Udumbara Jala.

3.4.3.5 Estimation of Iron by Volumetric method: -

Sample: -Udumbara Jala.

3.4.3.6 Estimation of Heavy Metals (As, cd, pb, Hg): -

Sample: -Udumbara Jala.

3.4.4 Microbial Contamination

Microbial Contamination of Udumbara Jala were done by following tests: -

3.4.4.1 Estimation of Total fungal count by Calometric method using SCDM & MHA & SDA media: -

Sample: -Udumbara Jala.

3.4.4.2 Estimation of E-coli by Calometric method using SCDM & MHA & SDA media: -
Sample: -Udumbara Jala.

IV. OBSERVATIONS

Observations were divided in 4 parts: -

1. Pharmacognostic Observations,
2. Physico-Chemical Observations,
3. Phyto-chemical Observation,
4. Microbial Contamination.

Udumbara Jala (Sap of Root): -
As it was study drug and no authentic previous data was found for reference, more precautions were taken to get correct & up to the mark data for further research work.

4.1 Organoleptic characters of Udumbara Jala (Sap of Root): -

- **Sample State: -** Liquid,
- **Colour: -** Colourless,
- **Appearance: -** Very mild turbid,
- **Taste: -** Tasteless,
- **Odour: -** Odourless,
- **Touch / Temperature: -** Cool (97.80 f)

4.2 Physico-chemical Observations of Udumbara Jala: -
Table 4.1: Physico-chemical Observations of Udumbara Jala

Sr. No	Test Name	Result Obtained
1	**Description**	Colorless liquid: Odour Characteristic : Tasteless
2	**pH**	7.58
3	**Specific gravity**	0.9755 gm/ml
4	**Total solid content**	12.42 %
5	**Turbidity**	1.5 NTU
6	**Refractive Index**	1.3345
7	**T.L.C**	Done

Table 4.2: Thin Layer Chromatography of Udumbara Jala

Sr.no.	Name of Sample	Result Obtained
1	**Udumbara Jala**	Done
TLC: **Extraction:** Water Extract **Adsorbent used:** Silica gel G60 F254 **Mobile phase:** Toluene : Ethyl Acetate : formic acid (5 : 5: 1)		
Iodine chamber: one Spots were observed.		

Spot	RF Value	Colour
1 st	0.19	Yellow

Fig. 11. Thin Layer Chromatography of Udumbara Jala

4.3. Phytochemical Observation of Udumbara Jala (Quantitative Assessments): -

Table 4.3 Quantitative Assessments

Sr. No.	Test Name	Result Obtained %
1	Description	Colorless liquid ; odour
2	Minerals	0.0038 %
3	Carbohydrates	0.021 %
4	Amino Acid	0.138 %
5	Proteins	0.138 %
6	Arsenic As As	< 0.01 ppm
7	Cadmium As Cd	< 0.1 ppm
8	Lead As Pb	< 0.1 ppm
9	Mercury As Hg	< 0.01 ppm

4.4. Microbial Contamination of Udumbara Jala: -

Table 4.4 Microbial Contamination Observations

Sr. No.	Test Name	Result Obtained
1	Total Fungal count (Yeast & Mold) (CFU/ml)	**01**
2	*E-Coli* / ml	**Nil**
3	MPN Count/ 100ml	**Nil**

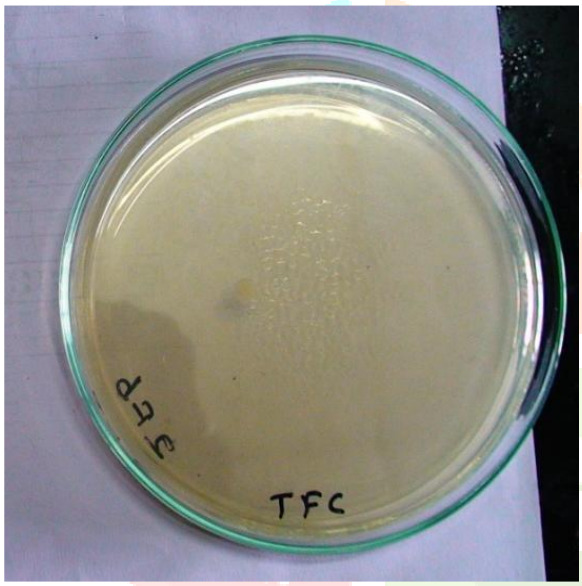

Fig. 12. Total Fungal Count

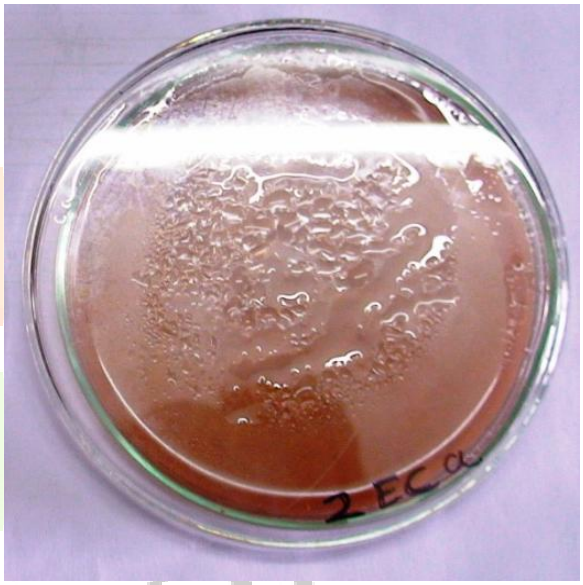

Fig. 13. E-Coli

V. DISCUSSION

Discussion on Selection of Topic:-

The main clause for selecting the topic was Drug i.e. Udumbara Jala (Sap of Root) was very unique. References of Udumbara tree as a whole were widely available in Ayurvedic texts that covered mainly bark, fruits etc. but there was very insufficient information on Udumbara Jala. Also Udumbara Jala was seen to be used in Folklore medicines & Traditional Ayurvedic practitioners in many conditions successfully, but just because of insufficient scientific data it was not recognized globally. Hence topic was chosen cause of its easy availability, cost effectiveness & above all its reorganization both medicinally as well as spiritually.

So the title of study was decided as "PHYTOCHEMICAL AND PHYSICOCHEMICAL ANALYSIS OF UDUMBARA JALA (SAP OF ROOT OF *Ficus racemosa* Linn.)"

Discussion on Collection of Drug (Udumbara Jala): -

Collection of Study drug (Udumbara Root & Udumbara Jala) was one of the most important parts of study as Results were totally dependent on proper sample. Root of Udumbara was collected, Dried, Powdered & send in a non-contaminated - Air tight - Plastic container for lab analysis. Whereas due to unavailability of data for storage & preservation of Udumbara Jala, the collected sample was send for lab analyses within 24 hrs of collection. Size of root was also a major part to consider as too small roots were not giving a proper flow of water; where as too thick root was difficult to cut in proper way so that there was difficulty in collection of sap of Root, also more the thickness of root it was seen, more deeper was their penetration to collect water and minerals. Cutting such roots might have surely caused some ill effects on Plant's Structure & Plant's Physical status.

Procedure used for Collection of Udumbara Jala can be used as a reference tool and can be standardized as a "Method of Collection" for Udumbara Jala as it was adopted after overcoming various practical obstacles without altering basic principals set by Ayurveda for collection of Drugs.

Sap of Root (Udumbara Jala) is available more in trees situated near water sources or reservoirs as compared to trees situated at far & dry places. Medium size root should be used for Collection. Sap of root i.e. Udumbara jala is widely available & can be used in various Disease conditions as those mentioned in Ayurveda & folklore Medicines.

Discussion on Conduction of Analytical Tests: -

Scientific data of Udumbara Root & Udumbara Jala was available after conducting tests like Physicochemical, Phytochemical & Microbial contamination as per norms described in API. It was seen that there were few observations common throughout & some were having variations. These Results can be used as a reference for further studies. For root of Udumbara, TLC was run more successfully in **Mobile phase:** Toluene: Ethyl Acetate: Formic Acid :: 5: 5: 1; as more spots (08) were observed at different Rf values as come pare to other **Mobile Phase:** Toluene: Ethyl Acetate :: 7.5: 2.5 where oniy 05 spots were observed, which might help to conclude that **Mobile phase:** Toluene: Ethyl Acetate: Formic Acid :: 5: 5: 1 is more acceptable when study on udumbara has to be done in future. Also same was the **Mobile phase** used for TLC of Udumbara jala, which was easy for comparing Observations of Udumbara root powder & Udumbara jala.

Discussion on Conduction of Analytical Tests: -
Scientific data of Udumbara Root & Udumbara Jala was available after conducting tests like Physicochemical, Phytochemical & Microbial contamination as per norms described in API. It was seen that there were few observations common throughout & some were having variations. These Results can be used as a reference for further studies. For root of Udumbara, TLC was run more successfully in **Mobile phase:** Toluene: Ethyl Acetate: Formic Acid :: 5: 5: 1; as more spots (08) were observed at different Rf values as come pare to other **Mobile Phase:** Toluene: Ethyl Acetate :: 7.5: 2.5 where oniy 05 spots were observed, which might help to conclude that **Mobile phase:** Toluene: Ethyl Acetate: Formic Acid :: 5: 5: 1 is more acceptable when study on udumbara has to be done in future. Also same was the **Mobile phase** used for TLC of Udumbara jala, which was easy for comparing Observations of Udumbara root powder & Udumbara jala.

Discussions on Observations: -

The present available data of Udumbara comprises of bark, fruit, etc., but there was no scientific data available about Udumbara Root & Udumbara Jala. Data about Root & Sap of root was studied for the first time. The study was done on **Pharmacognosy** which included Macroscopic & Microscopic Characters, Organoleptic Characters of Udumbara Root & Udumbara Root Powder,

Physicochemical analyses which include Determination of Foreign Matter, Loss on Drying, Ash Values, Soluble Extractives, pH, Specific Gravity, Total Solid, Turbidity, Refractive index, Thin layer chromatography (TLC).

Phytochemical analyses included Total Carbohydrates, Proteins, vitamins, Minerals, Heavy Metals.

Microbial Contaminations included Estimation of Total fungal count, E-coli.

The findings like presence of Carbohydrates, Proteins, Minerals & absence of Heavy Metals increases the scope for further research, where TLC, pH, etc. other parameters will serve as guidelines for research work on Udumbara Jala.

Specifically in TLC **Mobile phase:** Toluene: Ethyl Acetate: Formic Acid :: 5: 5: 1; was used in both udumbara root as well as jala. After successful conduction of TLC observations were analyzed thoroughly & it was found that the spots with Rf 0.19, was common in both cases. Where as in study of root 8 more spots were identified with Rf 0.33-0.38, 0.42, 0.63, 0.68, 0.70, 0.77, 0.91.

After discussing the above observations with experts from the field of Dravyaguna, Research, Botany, it can help us to conclude that root of Udumbara & Udumbara jala have one element / compound, probably Sugars or Carbohydrates in common in given conditions of Solvent, mobile phase, etc. whereas Root of Udumbara has 8 more elements or compounds which can be studied in detail in further studies

VI. CONCLUSION

The Conclusion of the study was as follows: -

- The present study gives basic data about reference ranges of various parameters for **Udumbara Jala** for further research.
- Presence of Carbohydrates, Proteins, Amino acids & Minerals.
- No Significance presence of Heavy metals.
- No presence of any Microbial contamination if collected properly.

So, the major outcome of the study was to provide guidelines regarding collection methods Udumbara root & Udumbara Jala & to provide Reference range of Udumbara root & Udumbara jala for further Analytical & Clinical study.

VII. ACKNOWLEDGMENT

I would like to thank my Guide, My Departmental Teaching Staff, Research Faculties, Non-Teaching Staff, My batchmates, Technicians and all my Dear Friends who helped me in completing the research project. Would also thank the Management for providing me the infrastructure and facilities for the same.

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प्रकाशन दिनांक ५ सप्टेंबर २०२१
पोस्टात टाकण्याची
तारीख : १० सप्टेंबर २०२१
एकुण पाने १ ते ५६
वर्ष ७५ वे

" यशस्वी चिकित्सेचा राजमार्ग "

॥ आयुर्वेद पत्रिका ॥

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अनुक्रमणिका

नागकेशर - एक संदिग्ध वनस्पती

वैद्य स्नेहा प्रकाश पाटील

Abstract : आयुर्वेद वनौषधीमधील संदिग्धता

आयुर्वेदातील द्रव्यगुणशास्त्र हे वेदिक काळापासून चालत आलेले आहे. संहिता काळात त्यात मोठी भर पडून निघण्टू काळात त्या द्रव्यगुणशास्त्रामध्ये सर्वोच्च प्रगती झाली. त्याचबरोबर वनौषधीच्या निश्चितीकरणात संदिग्धता सुध्दा वाढत गेली. चरकसंहितेमध्ये ज्ञात व अज्ञात वनस्पतींच्या संदर्भात पुढील श्लोक आला आहे.

यथा विषं यथा शस्त्रं यथाग्निरशनिर्यथा ।
तथौषधम् अविज्ञातं विज्ञातं अमृतम् यथा ।।

च. सू. अ. १

माहिती असणारे औषध अमृताप्रमाणे व माहिती नसणारे औषध विषाप्रमाणे सांगितले आहे. या आप्तवचनाप्रमाणे आयुर्वेदाच्या औषधींमधील संदिग्धता दूर करणे हे या क्षेत्रातील जाणकरांचे परमकर्तव्य आहे. त्या संदर्भात छोटासा प्रयत्न पुढील लेखात केला आहे.

Key Words - द्रव्यगुणविज्ञान, संदिग्ध वनौषधी, नागकेशर

आयुर्वेदातील इतर वनस्पतीप्रमाणे नागकेशर ही एक विवादास्पद वनस्पती आहे. भारतातील विविध भागात नागकेशर नावाने जे द्रव्य उपलब्ध आहे ते सर्व भिन्न आहे. कधी कधी एकाच ठिकाणी दोन तीन प्रकारचे नागकेशर मिळते. यांची नावे एकमेकांमध्ये इतकी मिसळली आहेत की त्यांना वेगळे करणे अवघड आहे यामुळे त्यांचे गुण कार्य वेगळे करणे सुध्दा अवघड झाले आहे. भारतीय बाजारात उपलब्ध नागकेशर या नावाने जे द्रव्य आहे त्याचे ढोबळमानाने पुढीलप्रमाणे ३ भाग करता येतात.

1. Mesua Ferrea - बंगालचे नागकेशर, 2. Ochrocarpus longifolius - दक्षिणचे नागकेशर, 3. Alophyllum inophyllum - ब्रह्मदेश नागकेशर वरील तीनही वृक्ष Guttiferea या वर्गातील आहेत. आयुर्वेदीय निघण्टुकारानुसार नागकेशर हे कर्पूरादि वर्गात सांगितले आहे. अलीकडे श्री. उस्मान अली यांनी बाजारात मिळणाऱ्या आणखीन २ प्रकारच्या नागकेशराचे अध्ययन केले आहे. a) Dillenia pentagyna roxb. b) Cinnamomum wightii neisn.

Mesua ferrea : आयुर्वेद मतानुसार हेच शास्त्रीय व खरे नागकेशर सांगितले आहे. जे नागचम्पा वृक्षाच्या पिवळ्या गुच्छापासून बनते. याचा रंग केशरी व तन्तु छोटे छोटे असतात. नागचम्पाचा वृक्ष मध्यमाकार, सुंदर, सदाहरित असतो. याचे खोड सरळ व साल राखाडी रंगाची असते. याची पाने लांब,भाल्याच्या आकाराची, ३-५ इंच लांब, १ ते १.५ इंच रुंद आयताकार, वरील पृष्ठ चमकदार हिरवे व खालील पृष्ठ श्वेताभ असते.

पुष्प – आषाढ, श्रावणात येतात. २-४ इंच व्यासाचे श्वेताभ पीत अति सुगंधयुक्त, गोलाकार, पाच दलयुक्त फुले यांच्या आत केशरी रंगाचे नरकेशर गुच्छ येतात. यालाच नागकेशर म्हणतात.

उत्पत्तीस्थान – संपूर्ण भारत विशेषत: पूर्वी भारत, नेपाल, आसाम, पूर्वी हिमालय, दक्षिण कोकण, पश्चिम घाट

संस्कृत नाव – भुजंगाख्य, चाम्पेय, हेम, केशर, नागकेशर, नागपुष्प, सुरपणिका, काञ्चनाह्वय (कांचन सोने समानार्थी शब्द), हिन्दी - नागकेशर, सुरपुन्नाग, गुजराती - पिलु नागकेशर, बंगाल - नागकेशर, नाकेश्वर, बिहार - नागकेसर, मराठी - नागचम्पा, नागकेसर, तामिल - करून नग, चम्पामम्, चेरूनगपू, तेलगु - नाग पञ्चकम्, नागकेसर, कन्नड - नाग सम्पिगे, इंग्रजी - Cobra's saffron, Latin Mesua ferrea

2) Ochrocarpus longifolius - याला यादवजी आचार्यांनी सुरपुन्नाग सांगितले आहे. या वृक्षाच्या पुष्प कलिका सुकवून नागकेशर या नावाने विकले जाते या वृक्षाला सुरंगी असेही म्हणतात.

उत्पत्तीस्थान – दक्षिण-पश्चिम भारत, कोईम्बतुर, मलबार किनारा ते कोकण

आकार – हा वृक्ष मध्यम आकाराचा, सदाहरित, याच्या शाखा गोलाकार असतात रक्ताभ धूसर वर्णाची साल १/४ इंच जाड असते. याचे लाकूड लोहासमान वजनदार काळे किंवा लाल वर्णाचे कठिण असते म्हणूनच याला Cylon Ironwood असे म्हणतात. याची पाने ५-६ इंच लांब व २ ते २.५ इंच रुंद असतात. वृन्ताकडे गोल व दुसऱ्या बाजूला टोकदार असतात.

पुष्प – वसंत ऋतुत (माघ - फाल्गुन) फुलतात. याची फुले सुंदर सुगन्धित, गुच्छाप्रमाणे येणारे चार अन्तरदल असणारे असतात. रंग पीताभ श्वेत असतो व यामध्ये लाल रेषा असतात. वृक्ष ५-६ वर्षांचा झाल्यावर फुले लागतात. स्वाद अम्ल, तिक्त आणि मधुर रसात्मक असतो. **फळ** – फुलानंतर बकुलसमान लांब अंडाकार फळे येतात. नावे - संस्कृत- सुरपुन्नाग, हिन्दी - लाल नागकेशर, गुजराती-रान नागकेशर, मराठी - सुरंगी, नागकेशर, बंगाली - सुरंगी, पुन्नागकेशर, Latin name - Ochrocarpus longifolius

3. Colophyllum inophyllum या वनस्पतीला यादवजी महोदयांनी पुन्नाग म्हटले आहे.

उत्पत्तीस्थान – दक्षिण भारत, बंगाल समुद्राजवळील भाग, श्रीलंका, ऑस्ट्रेलिया, पूर्वीय द्विप मध्यम आकाराचा सुंदर वृक्ष असतो. याची साल भुरकट स्निग्ध आकार असते.

पाने – याची पाने मोठया वडासमान लांब व गोल पुढे टोकदार असतात. १०-१८ cm लांब व पुढे ७.५ ते १० cm रूंद असतात.

पुष्प – याचे पुष्प श्वेत चार दलयुक्त सुगंधित, गोड सुगंध असणारे असतात. फुलांचा व्यास २५ cm पर्यंत असतो.

फळ – एक ते सव्वा इंच लांब प्रथम हिरवे नंतर निळे तसेच स्निग्ध असते. याच्या बियांपासून हिरवे तेल निघते ज्याला सर्पन का तैल असे म्हणतात. नावे संस्कृत - पुन्नाग, तुंगकेशर हिंदी - सुलतान चम्पा, सुरतूनिका मराठी - उंडी, उंडल बंगाल - पुन्नाग, सुल्तान चम्पक् ब्रम्हदेश - पैनिबर तेलगु - पुन्नाग तामील - नागय Latin name - Callophyllum inophyllum

4. Cinnamomum tamala Fr. Nees Family - Lauraceae

सदाहरित लहान वृक्ष याची उंची २५ ft पर्यंत असते. याची साल गर्द भूरी किंवा कृष्णाभ खरखरीत असते. याचा घेर ४।। ft पर्यंत असतो. पाने - पाने ५-६ इंच लांब व २-३ इंच रुंद, लरवाकार, आयताकार स्निग्ध चर्मवत असतात. ७.५ ते १३ mm लांब पर्णवृन्त असतात. काही नवीन पाने गुलाबी रंगाची असतात.

पुष्प – ७.५ mm लांब थोडे पीताभ रंगाचे, ५ ते १५ cm लांब सवृन्तकाण्डज् व पुष्पव्युहमध्ये येतात. पुष्प खण्ड ६ असतात. आयताकार, सिल्कसारखे मृदुरोमश असतात. पूर्ण पूंकेसर ९ असतात.

फळ – अर्धा इंच लांब अण्डाकार मांसल, काळया रंगाचे असते हे फळ काही वाढलेल्या परिपुष्प नाल वर लागलेले असतात. याचे सुकलेले अपक्व फळ काळा नागकेशर नावाने दक्षिण भारतात दिले जाते. याची साल म्हणजेच भारतीय दालचिनी आणि पाने तमालपत्र म्हणून विकली जातात. नावे - संस्कृत - तेजपत्र, तमालपत्र, हिंदी - तमालपत्र, तेजपत्र, बंगाल - तेजपत्र, मराठी - तमालपत्र, राजस्थानी- पतरज, गुजराती-तमालपत्र, आसामी - दोपली, तामील - फरूद पत्ती, Latin name - Cinnamomum tamala या झाडाच्या फळांचा औषधी उपयोग मलबार व चेन्नई येथील चिकित्सक नाट् नागकेशर किंवा सिरंगप्पु या नावाने करतात. तामीळनाडुमधील चिकित्सक नागकेशर या नावानेच प्रयोग करतात.

5. Dillenia pentagyna Roxb हा वृक्ष २० ft पर्यंत उंच असतो. याची पाने वेगवेगळी विखुरलेली असतात. हा पुष्पित वृक्ष आहे. द्विबीज पर्णक असतो. याची पाने साधी व कडक असतात. पराग कोष अंतर्मुख असतात. पुंकेशर अनियमित संख्या असते. फुले पीताभ स्वर्ण, फळे कठोर आतून गाभा असणारे असतात. याची कच्ची फळे नागकेशर म्हणून वापरली जातात.

प्राप्तीस्थान – नेपाळ, आसाम, दक्षिण सिलोन, मलबार नावे संस्कृत - भव्य, गुजराती - ओटफळ, करंबल, बंगाली - चालता, मराठी - करबल, करमल

निष्कर्ष – वरील तथ्यांचा विचार करता आपल्या असे लक्षात येते की आयुर्वेद औषधी निर्माण करताना आपण शुध्द समजून जे घटक वापरतो त्यातील अनेक घटकांमध्ये संदिग्धता आहे. त्यामुळे वेगवेगळया ठिकाणी वेगवेगळया व्यक्तीद्वारे बनवलेल्या औषधाचे गुणधर्म यांमध्ये समानता नाही आणि अशा औषधींचा मानवी शरीरावर पडणारा प्रभाव सुध्दा संदिग्ध आहे. त्यामुळे वनस्पती विशारद वैद्य यांचे कर्तव्य आहे की या वनौषधींमधील संदिग्धता दूर करून सर्व देशीय समानता प्रस्थापित करावी ही आजच्या काळाची परमावश्यकता आहे.

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वैद्य रणजीत पाटील
प्रोफेसर, द्रव्यगुणविज्ञान विभाग, यशवंत आयुर्वेद महाविद्यालय, कोडोली, ता. पन्हाळा, जि.कोल्हापूर

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INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

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A review on Vatasnabh

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Ayurved 'The Science of Life' originated in India more than 5,000 years ago and is often called the "Mother of All Healing." This science is practiced in India since ages. This science is also called Astang ayurved. Ashtanga Ayurveda means eight limbs or eight branches of Ayurveda which includes

काय.बाल.ग्रहोर्ध्वाङ्ग.शल्य.दंष्ट्रा.जरा.वृषान् ॥ ५ ॥
अष्टाव् अङ्गानि तस्याहुश्चिकित्सा येषु संश्रिता । A.H. 1/ 5-6

Damsha Chikitsa or Visha chkitsa is one of the important limb of Ayurveda which deals with toxicology. 'Visha' is that which causes 'Vishannatva' (distress) and / or vishada (sadness) in the body. Thus 'Visha' has been defined as a substance which is destructive to life and possess properties like Vyavayi, Vikasi, Ushna, Tikshna, Ruksha, Sukshma, Ashukar, Anirdeshya rasa / Apaki etc. And the drugs which possess these properties are called 'Vishas' and those which are less in virulence than 'Vishas' are called 'Upavishas' (sub-poisons). In this it deals with toxic metals,animals and plants. The use of toxic plants in Ayurvedic preparation is very common.According to Acharya Charak that If the substance is given with purpose to save life it is medicine but if it is given with the intention to cause bodily detriment it is poison.(1)There is no substance in the universe which cannot be used as drug on the condition that they are used rationally and with define object. (2).

Visha(poison) is generally defined as a material which when administered, inhaled or swallowed is capable of acting deleteriously on the body. Therefore almost anything is poison. There is actually no borderline between a medicine and a poison, for a medicine in a toxic dose is poison and a poison in a small amount may be medicine. In law the real difference between a medicine and a poison is the intent with which it is given.

Vatsanabha, the Ayurvedic synonym to Aconite has derived its name from sanskrit for the resemblance of its tuber to the umbilicus (Nabhi) of a calf (Vatsa).Vatsanabha or Mahavisha, Aconitum feroxis a species of monk's hood from the family. Ranunculaceae is a deciduous perennial with tall and erect stems crowned by racemes of large eye catching blue, purple, white zygomorphic flowers with numerous stamens.(20)

History of Aconite

Aconite is a commonly used drug in traditional medical practices world over. Its toxic properties were possibly first noticed and utilized by tribes to make their arrow and spear heads poisonous [7]. Word Aconite is derived from a Greek word Akoniton, which stands for spear or lancet .A paste of Aconite tuber, was utilized for this purpose. Aconite (Vatsanabha) found its place in Ayurvedic pharmacopeia for centuries back with its first possible mention in Atharva veda

English: Indian aconite, Monk's hood, Aconitum

Hindi: Bachnag, Meetavish, Bachanag, Bis, Bish, Mhoor

Telugu: Ativisa, Nabhi

Bengali: Bish, Butsnabish, Katbish

Marathi: Bachag, Vachnag

Gujarathi: Shingadivachanag

Tamil: Vashanavi

Malayalam: Vatsanabhi, Vatsanabham

Kannada: Vatsanabhi

Susruthacharya quoted about four varities of vathsanabhi. Rasavagbhata have also elaborated the four varities as brahma, kshthriya, vaisya, shudra, But Rasatarangini had described only three variety of vathsanabh on the basis of colour they are Krishna, kapisa, and panduvarna. They are considered as superior to each other in the similar order.

Rasa Panchank of Vatsanabh.

Rasa- Madhur

Vipak- Madhur

Virya - Ushna Guna

Dosha Karma- Kapha-vata shaman

Dhatu Karma- Alpa matra Balya Bruhan

Synonyms based Traditional discription of Aconite(Vatsanabha) in Indian medicine.

1.Sindhuvara - (Vitex nigundo) like leaves.
2. Gostanakar -Tuber shape is like cow's nipple
3.Yat Parthiva na taro vruddhi- Does not permit other plants to grow nearby
4. **Pandur** - Pale color tuber.
5. **Neel Pushpa**- Blue flowers
6. **kanda Visha** - Toxic properties in tuber.
7. **Kshupa** - Shrub
8. **vatsanabhykrit** - like umbilicus of a calf

References Of Vatsanabh from Ancient Texts

1.Charak samhita

In Charak Samhita, Vatsanabh has been mentioned as Visha, Shringi Visha and as Vatsanabh.

Charak samhita (Chikitsasthana) - Aindri Rasayana – Rasayana, ojasakar, vataroga (10)

(Chikitsasthana) - Vishamjwar – Vishamjwar (11)

(Chikitsasthana) - Vishachiktsa - Sthavar visha (12)

(Chikitsasthana) -Vishachiktsa **-** Moola Visha**-** Sthavar visha (12)

2. Sushrata samhita

Vatsanbh has been mentioned in Sushruta Samhita in Chikitsasthan and Kalpa Sthan.

Sushrata samhita – Chikitsasthan – Vajrak Tail – Nadi vran, Dushit Vran (26)

Chikitsasthan – Mahavajrak Tail - Kushta,Gandamala,Nadivran (26)

Kalpa Sthan - Stavar Visha

Kalpa Sthan - Kandavisha Bheda

Kalpa Sthan - Kandavisha Lakshana

3. Ashtang Hridayam

Renferences of Vatsanabh in Ashtang Hridayam are mainly in Uttartantra.

Ashtang Hridayam –- Chikitsasthan - Kushtadi tail – Visha

Uttartantra – Tutthanjana – Tikshna Dushti

Uttartantra – Karanja Tail – Gandamala

Uttartantra – Bhadryadi Tail – Kushta, NadiVrana, Apachi

Uttartantra – Sindhuvarmuladaya Agad – Vishadosha

Uttartantra – Bramhyadi Rasayan – Kushta,Gulma Visha

Vatsanabh as mentioned in Laghutrayee and other texts

1.Bhaisajya Ratnavali-

Agnikumara rasa - Indigestion

Agnisandipana rasa - Indigestion

Agnitundi Bati - Indigestion

Hinguleshvara Rasa - Joint pain, Viral fever

Jvarankusha rasa -Pain and fever

Mrita sanjivani rasa - Rheumatic pain,Malarial fever

Ramabana rasa - Diarrhea, pain in abdomen

Shvasa kuthara rasa - Asthmatic bronchitis

Shula kuthara rasa - Septicemia

2. Bhava Prakash

Ajirna kantaka rasa - Indigestion

Tripur bhairava rasa - fever

3. Yoga Chintamani

Amara sundari Bati - Vata disease

Kanaka sunder Rasa- Septicemia, Viral fever

Kalari Rasa

4. Sharangdhara Samhita

Sanjeevani Bati -Common cold with fever, indigestion

5. Yoga Ratnakara

Amrit Kala nidhi Rasa- Indigestion, Fever

Durjala jeta rasa -Disease caused by contaminated water as infective diarrhea, fever

Gada murari Rasa- Inflammatory fever

Narayana jwarankusha rasa - Fever

Pratap lankeshwara Rasa- Puerparial fever

Tribhuvan Kirti Rasa - influenza, viral fever

6.Anupana Tarangini –

Ashvini Kumara rasa- Chronic diarrhea

7.Sidha Yoga Samgriha-

Aswakanchuki Rasa- Respiratory tract infections, fever

Kasturibhairava Rasa - Enteric fever

8.Rasa Raj Sunder

Ananda Bhairava rasa - Fever, cough, diarrhea

9.Rasa Sara Samgriha

Betal rasa- Malarial fever, Septicemia

Jaya Bati- Pain in abdomen

Vata gajankusha - sciatica,obesity, Vata disease

10.Rasa Tarangini

Kapha ketu Rasa - Common cold, Cough,fever

Mritunjaya Rasa - Chronic fever

Shiva Tandava Rasa - Septicaemia

11.Rasa Yoga Samgriha

Laxmi narayana rasa - Chronic fever

12- Rasa Yoga Ratnakara

Grihani Gaja kesari - Infective diarrhea

13.Rasa Yoga Sagar

Pancha Vaktra rasa- Septicaemia, Fever

14.Rasa Ratna Sammuchaya

Panchamrita Rasa- Initial and chronic stage of tuberculosis

15.Brihad Nighantu Ratnakara

Shula kuthara rasa-Indigestion

Shodhana Of Vatsanabh

1 .Swedana in Aja dugdha or Go dugdha for 3 days [18,19,24]

2. Sthapana and Aatapa shoshana in Gomootra for 3 days [22,21,22,23]

3. Sthapana or Aatapa shoshana or Bhavana in Gomootra for 3 days

Toxic effects of Vatsanabh

Toxic effects of Vatsanabh are well noted in Ayurvedic texts. It is warned for over dosing or crude use without shodhan.It may cause Daha (burning sensation), Syncope, bradycardia, or Cardiac arrest(Hridgati Aodhana).It may also prove fatal.[9]

Necessity of Shodhana:

Impure or impurely purified Vatsnabha if administered in any form will cause Daha (acute burning sensation) all over the body. It may also cause Murcha (Syncope), Hrutrodana (cardiac arrest) which may usually lead to Mrutyu (death) of patient [8]. Use of Vatsnabha in higher dose may also lead to toxicity and death. All parts of the plants are poisonous. Tuber is chiefly used as a poison. Leaves handled or rubbed on the skin, produces tingling and numbness. The odor of the plant has a narcotic effect; its pollen causes pain and swelling in the eyes. It imparts a sensation of tingling & numbness to the tongue, lips & mouth when chewed.[3]

Changes occurring during Shodhana

Though treatment with cow urine, cow milk, or cow dung is the traditional method of Shodhana, it may not be feasible or acceptable to all. After Shodhana process, the total alkaloid content decreases,[4] but the contents of less toxic substances such as aconine, hypoaconine, and benzylhypoaconine increases [5,6] possibly due to conversion of the toxic aconitine into aconine or hydrolysis of the alkaloids to their respective amino alcohols after Shodhana process[7-8]

Methods of Shodhana of Vatsanabh

Method (1): A properly collected Vatsanabha should be broken into small pieces and dipped in a stone or earthen vessel containing cow urine.The vessel is to be kept under sun for three days with a change of urine every morning.After three days take the Aconite out from the vessel, peel off its skin and make it dry under the sun.

Method (2): Small pieces of Aconite are to be kept in a cloth bag and is kept for boiling through a dola yantr containing cow milk. After 3-6 hour of boiling through this we get shodhit Vatsanabh.

Method (3): In second method, Goat milk is used instead of cow milk. Through this way also Vatsanabh.can be purified.

Fatal period, Fatal dose and Cause of Death

Fatal dose[14]

• Indian aconite root: 1.3-2gm • Tincture: 5ml • Liniment: 1ml • Pure aconitine: 2mg • Aconitine nitrate: 4mg.

Fatal Period [15]

Fatal period is usualiy 1-5 hrs it may very from person to person and amout of dose administered .Doses below Lethal Dose produce alarming symptoms immediately. In Non-fatal cases: numbness & tingling sensation persist for some time.

Recovery Period [16]

Recovery time is dependent on amount of intoxication. Mildly intoxicated patients may take 1–2 days while patients with cardiovascular complications may take 7–9days to recover.

Cause of death [17]

Death may be due to Respiratory failure or Ventricullar Fibrillation

Diet during Consumption of Vatsanabh

As per advised by ancient Acharyas ,while patient is consuming Vatsanabh Kalpa ,use of Katu, Amla and Lavana all the taste which rise Pitta, oil, afternoon nap, exposure to sun and exposure to heat shold be avoided. Consumption of cow milk, wheat, naturally cool water, & food that are naturally sweet are advised .

Contraindication of Vatsanabh

Vatsanabh is contraindicated in Grishma (summer) and Varsha Rutu (rainy).Due to its Tikshna guna its is contraindicated in Pitta Predominat people, pregnancy and dehydrated patients.

Adverse drug reaction (ADR)

An adverse drug reaction (ADR) is an unwanted or harmful reaction experienced following the administration of a drug or combination of drugs under normal conditions of use and is suspected to be related to the drug. An ADR will usually require the drug to be discontinued or the dose reduced.

ADR reporting of Vatsanbh

Reports of ADR from Ayurvedic drug intake were only minimal and suggesting for their under reporting. Many cases have occurred in China and Hong Kong. Vatsanabh poisoining in acute cases leads to cardiac toxicity.

There was suspected case of Vatsanabh poisoining due to over dose of *Tribhuvankirti Rasa* Showing symptoms of Bradicardia, fatigue, etc the symptoms reduced after the dose of *Tribhuvankirti Rasa* was stopped.

Conclusion

Vatsanabh (Aconite ferox) is described as Sthavra Visha i.e poisonous plant by our ancient Acharyas.Though its toxic nature it can used in Ayurvedic Preparation after proper shodhan & if consumed in proper dosage. The Chemical constituents are toxic in nature but after shodhan it reduces the toxicity & transforms into non toxic or relatively less toxic substance & enhance its biological efficacy. The improper consumption of Vatsanabh can lead to ADR,so care should be takn accordingly.

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AYURVED DARPAN JOURNAL OF INDIAN MEDICINE REVIEW ARTICLE AMALAKI - A REVIEW

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INTRODUCTION

Ayurved the ancient medical science which is been practiced in India and various parts of world since very long time. In Sanskrit, Ayurveda means "The Science of Life." Ayurvedic knowledge originated in India more than 5,000 years ago and is often called the "Mother of All Healing." It stems from the ancient Vedic culture and was taught for many thousands of years in an oral tradition from accomplished masters to their disciples. Ayurveda believes that there is no such plant found in nature which has no medicinal value. Ayurveda is considered by many scholars to be the oldest healing science. Some of this knowledge was set to print a few thousand years ago, but much of it is inaccessible. Amalaki (Emblica officinalis) (EO) has a hallowed position in Ayurveda- an Indian indigenous system of medicine.

Amalaki is commonly known as "Indian gooseberry " According to belief in Indian mythology, Amla is the first tree to be created in the universe; which belongs to the family of Euphorbiaceae and is also known as Phyllanthus emblica or Indian gooseberry Amla is native to India and also grows in tropical and subtropical regions of Pakistan, Uzbekistan, Sri Lanka. South East Asia, China and Malaysia. The fruits of Amla are widely used in the Ayurvedic preparation and are believed to increase defence against diseases. It has a beneficial role in degenerative diseases like cancer, diabetes, liver treatment, ulcer, anemia, heart trouble and also is an important constituent in hepatoprotective formulas available[2]. Amla is highly nutritious and is one the richest sources of vitamin-C, amino acids and minerals, to possess biological activity. Almost all parts possess medicinal properties, particularly fruit, which has been used in Ayurveda as a powerful rasayana and in customary medicine in the treatment of

diarrhoea, jaundice, inflammation and several other ailments Amla: fruit is widely used in the Indian system of medicine as alone or in combination with other plants and is used to treat common cold and fever, as diuretic, laxative, liver tonic, refrigerant, stomachic, restorative, anti-pyretic, hair tonic; to prevent ulcer and dyspepsia.

The Atharva Veda mentions many plants and also mentions many families. For example (Asikin, Prisni, Stambini etc.) as well as plant classification is done keeping in view the factors like its place of origin, properties etc. The use of the drug in medicine is then described in detail in Samhita Kama. Fifty classes are mentioned in Fifty classes are mentioned in sequence in Charak Samhita Sutra Chapter 4 and about 500 plants are mentioned in them.

The study of medicinal plants is also described in other Samhita and Nighantu. The principles of many of the natural healing systems now familiar in the West have their roots in Ayurveda, including Homeopathy and Polarity Therapy.

The subject of Dravyaguna is not included in Ashtanga Ayurveda but it is a pillar of Ashtanga a. Dravygun subject Mentioned in Rugweda. In Rigveda many plants were used for healing. It was later mentioned in other Vedas.

The word medicine is defined as follows in one of the verses of Atharva Veda.

There are various text of Ayurved, out of which three major texts are called as Brihatrayi and the minor ones are called Laghutrayi.

Dravyaguna Vigyan stands on the foundation of Tridoshas, , Saptadhatu.Panchamahabhutas are Prithvi (earth), Aap (water), Tej (fire), Vayu (air), Akash (ether). Rasa, Rakta, Mansa, Meda, Asthi, Majja, Shukra are the Saptadhatus present in the body. Tridoshas are the three fundamental principle which governs the function of our body on the physical and emotional level they are Vata, Pitta and Kapha.

Amlaki is mentioned in various ayurvedic text.

KEYWORDS:– Amalaki, Rasayan.

Table no. 1: Amalaki Raspanchak according to aurveda.

Drug Name	Latin name	Family	Rasa	Vipak	Virya
Amalaki	*Emblica Officinalis Gaertn*.	Euphorbiaceae	Amla Pradhan Madhur, Katu, TiktaKashay Ras Except Lavan	Madhura	Shita

Drug details

Classification According to Modern

- **Kingdom:** Plantae
- **Division:** Angiospermae (Charak)
- **Class:** Dicotyledonae
- **Order:** Geraniales
- **Family:** Euphorbiaceae
- **Species:** officinalis Geartn.

Classifiation According to Ayurveda

- **Gan** – Virechanopag, Vay- Sthapan Parushakadi, Triphala (Sushrut)

Vernacular names

- **Genus:** Emblica
- **English:** Emblic myrobalan
- **Sanskrit:** Aamalaki
- **Hindi:** Amla
- **Marathi:** Amla

Description - Amalaki tree- It is a small to medium sized deciduous tree with an average height of 8-18 m, withthin light grey bark exfoliating in small thin irregular flakes. The average girth of the main stem is 70 cm. The main trunk is divided into 2 to 7 scaffolds very near to the base 3. Leaves are 10-13 mm long. 3 mm wide, closely set in pinnate fashion which makes the branches.

Flowers – Flowers Greenish-yellow, inaxillary fascicles on the leaf bearing branchlets, often on the naked portion below the leaves. Flowers areunisexual, 4 to 5 mm in olor, borne in leaf axils in clusters of 6. almost depressed to globose shape.

Seeds- seeds contain fixed oil phosphatidesand small quantity ofessential oil are 4-5 vide,

Fruits – fruit is fleshy, spherical, light greenish yellow, quite smooth and hardon appearance, with 6 vertical stripes orfurrows 4 each containing usually two seeds; seeds are 4-5 mm long and 2-3 ruits are: moisture 81.2%, carbohydrates14.1%, mineral matter 0.05% , K 0.02 %,Fe 1.2 mg/100g. phyllemblin, phyllemblic acid, gallic

Leaves - Amalaki leaves are Subsessile,closely set along the branchlets, distichous, narrowly linear, obtuse, having appearance of pinnate leaves. It contains Gallic acid, Ellagic acid, Chebulic acid, Chebulagic acid, Chebulinic acid, a Gallotannins called Amlic acid, Alkaloids, Phyllatidine and Phyllantine.

- **Leaf apices** - Acute
- **Leaf arrangement** - AlternateSpiral
- **Leaf bases** – Sheathing
- **Leaf margins** - Entire
- **Leaf shapes** - Linear
- **Leaf types** - Simple
- **Branches** - Drooping
- **Habit** - A tall erect green
- **Habitat**: Almost in every part of India especially in deciduous forests.

Amalaki is highly nutritious and is an important dietary source of vitamin C, minerals and amino acids. The dominant active constituent of the herbis a group of tanninsderived from Gallic and ellagic acids, which make up a large portion of the extractable nonnutritive constituents. Il of these constituents work together to enhance immunity, mical Composition Of Amalaki. The fruit gave cytokinine-like substances identified as zeatin, zeatin riboside and zeatinnucleotide; suspension culture gave phyllembin.

Phyllembin exhibits CNS depressant leaves is found to be effective in rat paw inflammation. The bark containstannin identified asmixed type of proanthocyanidin.

Raspanchak – Ras- Mukhya Amla, Other Ras Madhur, Katu, Tikta, Kashay

Veepak – Madhur

Veerya – Shita

Gun – Laghu, Ruksha

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Textual review bhavprakash

हन्ति वातं तदम्लत्वात् पित्तं माधुर्यशैत्यतः । कफं
रूक्षकषायत्वात् फलं धात्र्यास्त्रिदोषजित् ।। भा. प्र.

Sthanin- As it is anti-inflammatory, eye and hairy, apply amla kalka or vowel in inflammation and biliary headache. Wash hair with amla juice in khalatiya and palitya. In eye diseases, it should be applied to the eye. Amla kalk prepared with sesame seeds and milk should be used for leprosy.

Applying amla oil stops premature aging and hair growth. Amalki extract is useful for ulcer treatment.

Sushruta: Raktaabhishyand

- Amalki leaves and fruit juice should be given.
- Urinary incontinence - Amalki swaras shouldbe given along with 16 tola ghrita.
- Amalki powder boiled in milk should be given in Kasa along with Haridra powder and honey.

Bhavprakash nighnatu

वयस्यामलकी वृष्या जातीफलरसं शिवम्
धात्रीफलं श्रीफलं च तथामृतफलं स्मृतम् ॥
त्रिष्यामलकमाख्यातं धात्री तिष्यफलाऽमृता ॥ ३८
॥ हरीतकीसमं धात्रीफलं किन्तु विशेषतः ।
रक्तपित्तप्रमेहघ्नं परं वृष्यं रसायनम् ॥३९॥
हन्ति वातं तदम्लत्वात्पित्तं माधुर्यशैत्यतः ।
कर्फ रुक्षकषायत्वाफलं धात्र्यास्त्रिदोषजित् ॥४०॥
यस्य यस्य फलस्येह वीर्यं भवति यादृशम् ।
तस्य तस्यैव वीर्येण मज्जानमपि निर्दिशेत् ॥४१॥

Amlaki is raktapittaharvrushya

Tridoshnashak, shukravardhak Jwarghna, Anulomak.

Rajnighantu

आमलकं कषाययाम्लं मधुरं शिशिरं लघु ।
दाहपित्तवमीमेहशोफघ्नं च रसायनम् ।। रा. नि.

Charak – Rasayan -256 Tola Amalki powder by giving the bhavana of Amalki swaras for 21 days and then making its powder. Mix 256 tola of honey and 256 tola of ghee in that powder. Then, after pouring 96 ounces of Pippali powder and 48 ounces of sugarcane, fill the mixture in an aloe vera container and attach the container to the ash heap during the rainy season.

- Vataraktamadhe - Amalki Swaras mix with Purana Ghritam
- Wajikaranardha-Amalki Rasayan should be licked in the morning and evening along with 1/4 tola of sugarcane Chakradatta: In Pittajshool - Eat Amalki Swara with mishri

1. **Bhavprakash:** In case of urinary incontinence, Amalki churna mix wih water and applied on the affected area.
2. **Vangsen:** In Netrashool - Amalki Swarasane netrapuran karawe
3. **Sharangdhar:** In case of nasal hemorrhage, amalki powder should be rubbed in ghee and then applied on the forehead, then nasal hemorrhage stops Karma of Aamalaki according to Ayurveda Activities of Aamalaki according to modern

Vataraktamadhe - Amalki swaras mix with purana ghritam

- Wajikaranardha- Amalki Rasayan should be licked in the morning and evening along with 1/4 tola of sugarcane
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- Amalki powder boiled in milk should be given in Kasa along with Haridra powder and honey

Sushruta: Raktaabhishyand

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Amalki extract is useful for ulcer treatmentand implantation.

- Fever - Fever patients who do not get sleepand sweating and get thirsty should get Amalki and Ardak

Chemical Composition and Activities

It is rich source of Vitamin C. Fruit contains Galic Acid, Tannic acid, Glucose, Albumin, Cellulose, Calcium

Major chemical constituents

Root- Ellagic acid, Lupeol, Oleanolic aldehyde

Bark- Leucodelphinidin, Procyanidin, Tannin etc.

Fruit- Vit. C, Phyllemblin, Linolic acid, Indole a cetic and Ayxubsm trigaloylglucose, terchebin, Corilagin, Ellagic phyllemblic acid & salts.

- **Activities**
- **Anti-ageing:**– It contains low molecular weight hydrolysable Tannis so it is strongest antioxidant herb
- **Antidibetic:**- It contains high amount of vitamin C
- **Eye diseases**- Amalaki called Chakshushya in Ayurveda .It is effective in conjunctivitis Glaucoma
- **Anti-inflammatory and Antipyretic** – The contents like tannins alkaloids phenolic compounds amino acids
- **Antihyper thyroid**

CONCLUSION

- Amalaki is having highest source ofvitamin C.
- Amalaki improves healthy metabolism, digestion andelimination.
- It possesses anti-inflammatory properties, nourishes body tissueand organs.
- Present article has been a focus onthe utilization of Amalaki fruit for their functional and pharmacological properties.
- Amalaki fruit is rejuvenative androtective for the heart and respiratory system.
- Amalaki is a natural antioxidantwhich promotes healthy eyes, growth of hairs, nails, and skin.
- Amalaki pacifies Vata, Pitta,and Kapha, though it specifically alleviates Pitta.
- In addition, Amalaki rejuvenatesall of the tissues in the body andbuilds Ojas which is the

It Balances Jatharagni (digestive fire).

- Amalaki builds Ojas
- Ojas increases Bodily strength, vigour, energy, ability to support a healthy immune response.
- Amalaki is stated as a Rasayana drug in Ayurveda which is having a rejuvenating effect on bodytissues.

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A Critical Review on Chitrak

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ABSTRACT

Ayurveda is the oldest medicinal system in India. Ayurveda is a science of life with a holistic approach to health. It has ability to treat many chronic diseases such as cancer, diabetes, arthritis and asthma which are untreatable in modern medicine. Plants are the exclusive source of the drugs for the treatment of the diseases. In Ayurveda the concept of Ama is unique. Ama is said to be the root cause of all diseases. Amaya is a Sanskrit word for disease literally means that which is born because of Ama. As per Ayurveda, the Agni is essential for the maintenance of perfect health. Ama forms as a result of impaired Agni, and that, in turn, destroys Agni. Ama is a causative factor in number of diseases. So Ama pachan and Agni Deepana is very effective to improve all heath issues. For this the wonderful drug Chitraka is mentioned in our Ayurvedic texts. Plumbago zeylanica Linn.belongs to family Plumbaginaceae, commonly known as Chitrak is one of the medicinal plants used in the Indian traditional system of medicine. In this article, we are going to discuss about Chitrak & its medicinal aspect as mentioned in Ayurvedic texts.

Key Words: *Chitrak, Ama, Deepana, Plumbago zeylanica Linn,*

Introduction:

Ayurveda is the ancient medical science practiced in India since very long time. Citraka is a well recognized and reputed plant to treat number of diseases. It is very effective as agnideepak, kaphahar, arshahar, kushthhar etc. Its effect in Ama pachan and Agni deepana is proven. The word Chitrak gives us a unique resemblance to the leopard as it tears accumulated lumps like. Chitrak is one of the powerful digestive and carminative herbs of Ayurveda. It is used in most of Ayurvedic medicines for indigestion. The white variety of Chitrak, *Plumbago zeylanica Linn.*, commonly known as Ceylon leadwort, Doctorbush or wild leadwort. It is an oldest herb that was used in Ayurveda for several disorders over thousands of years.

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Latin Name:

Plumbago zeylanica Linn.

The generic name is derived from the Latin words plumbum, meaning 'lead', as this plant was reputed to cure lead poisoning. The specific epithet zeylanica means 'from Sri Lanka' which was formerly called Ceylon. Plumbago means an evergreen flowering shrub.

Synonymes:

- **Dipaka:** Due to Ushna veerya it stimulates digestive fire
- **Jarana:** Digests food
- **Citrak, Vyala:** Tears accumulated lumps like leopard
- **Agni:** Denotes its digestive property
- **Citraka:** Signifies tearing action
- **Agnika:** Due to its fiery hot nature

Vernacular Names:

1	Hindi	**Chita, Chitarak, Chitra**
2	Bengali	**Chita, Chitu**
3	Kannada	**Pellichitramula**
4	Punjbi	**Chitra**
5	English	**Ceylon Leadwort**
6	Telugu	**Chitramulam, Agnimata**
7	Farasi	**Bekha baranda**
8	Marathi	**Chitramula**
9	Gujrati	**Chitro**
10	Tamil	**Kodivel**
11	Malyalam	**Vellakotuveri**

Botanical Description:

Kingdom: Plantae

Sub-kingdom: Tracheobionta

Super-division: Spermatophyte

Division: Mognoliophyta

Class: Mognoliophyta

Sub-class: Caryophyllidae

Order: Plumbaginales

Family: Plumbaginaceae

Genus: Plumbago

Species: Zeylanica

It is a perennial bushy shrub. The plant grows upto height of about 0.5–2 m. Leaves are dark green in colour having thickness of 1.5 inch and width up to 3 inch. The leaves are alternate, simple and ovate and they consume hairy margin. Flowers are bisexual, 10-25cm long, white in colour, having diameter of 1-1.5cm, exists in bunches. Fruits have apex and contains single seed that is oblong. Root is brown in colour from outside and white from inside. In India it is scattered in central India to West Bengal, Maharashtra and Uttar Pradesh to some parts of South India.

Parts Used : Root Bark

Chemical Constituents:

1) Plumbagin
2) 3 - Chloroplumbagin
3) Plumbagic acid
4) Isozeylinone
5) Glucose
6) Fructose
7) Aspartic acid
8) Hydroxyprolin

Plumbagin is a yellow pigment that patents in members of Plumbaginaceae family. The roots contain plumbagin while the stem has a lesser volume and leaves have no plumabgin. It is natural yellow pigment because of existence of naphthoquinone pigment and is exists in the form of needles. Plumbagin is soluble in alcohol, acetone, chloroform, benzene, and acetic acid and is exceedingly toxic compound with corrosive possessions. Plumbagin has antibacterial activity in contradiction of numerous pathogenic bacteria. The methanolic extract of plumbagin shows strong antibacterial activity against Escherichia coli, Salmonella typhi and Staphylococcus aureus and inhibitory outcome in contradiction of Klebsiella pneumoniae, Serratia marcescens and moderate result in contradiction of Bacillus subtilis and less low effect contrary to Proteus vulgaris and Pseudomonas aeruginosa. The aqueous extract shows less antibacterial action as related to organic extract. Plumbagin shows anticancer, antifungal, antimicrobial activity, antibiotic effects.

Varieties:

Vagbhata stated three varieties viz., Shweta(white), Pita(yellow) & Asita(black) Chitraka.

Bhavprakash Nighantu stated three varieties viz., Shweta, Rakta & Neela Chitraka.

P. zeylanica (White); *P. rosea* L. (red) and *P. capensis* (blue).

P.V. Sharmaji described the later two varieties as *P. indica* Linn. and *P. auriculata* Linn.

P. rosea L.

P. capensis

Classical Texts:

In classical texts Chitrak is categorized in different groups considering its medicinal properties and therapeutic uses.

Charaka:

Dipaniya mahakashaya, Shulaprashamana mahakashaya, Arshoghna mahakashaya, Lekhaniya mahakashaya.

Sushruta:

Pippalyadi gana, Mustadi gana, Amlakyadi gana, Varunadi Gana, Aragvadhadi Gana. Vagbhata: Pippalyadi gana, Mustadi gana, Varunadi Gana, Aragvadhadi Gana.

Bhavprakash nighantu:

Haritakyadi varg.

Sharangdhar nighantu:

Acharya Sharangdhar mentioned that those Dravya which are used for digestion of unripe food and to initiate the digestive fire termed as Deepana- Pachan dravya, example is Chitraka.

Drug Guna:

Rasa	Guna	Virya	Vipak
Katu	Laghu, Tikshna	Ushna	Katu

Uses:

- Chitrak is vata, kapha and pitta shamak i.e. Tridoshaghna.
- ***Digestive system:*** Chitrak has Deepana (appetizer) and Pachana (digestion) properties that help improve digestive problems such as loss of appetite, indigestion, bloating, gas and dysentery or diarrhoea. Chitrak also helps manage constipation because of its Rechana (laxative) property.
- ***Liver diseases:*** It is useful in liver diseases.
- ***Grahani:*** In Grahani it is used with takra.
- ***Krumi :*** It acts as Krumighna.

- ***Arsha:*** Chitrak dosages effectively reduce painful Piles because of their pain-relieving properties due to the Vata and Pitta dosha balancing properties.
- ***Shoolhar:*** The paste prepared from the leaves of Chitrak is used for application to manage rheumatic pain because of its Vata balancing property.
- ***Shothahar:*** It reduces the swelling on the affected area due to its Vata balancing and anti-inflammatory properties and helps in wound healing.
- Due to Garbhashaya sankochaka, Garbhastravkar properties it is used in Anartava, Makkalshoola etc.
- ***Obesity:*** Chitrak has Pachan and Deepan properties that help in reducing fat accumulation, these properties are essential in managing obesity. Chitrak also reduces blood cholesterol and triglyceride levels and thereby, helps in weight loss.
- ***Diabetes:*** Chitrak root supplements help manage diabetes. The components present in Chitrak roots help enhance insulin secretion because of their anti-diabetic nature and antioxidant properties that help in lowering blood glucose levels.
- ***Respiratory system:*** Chitrak has a Kapha balancing nature which is beneficial in reducing the symptoms of cough and cold.
- ***Cholesterol:*** High cholesterol occurs due to deposition of toxins in the form of Ama, Chitrak prevents this deposition due to its Deepan, Pachan, Lekhan(scrapping) properties. Chitrak supplements are very effective in preventing the deposition of saturated fatty acids in arteries and maintaining the blood flow in the body, which avoids atherosclerosis and further reduces the chances of heart attack.
- ***CNS:*** Chitrak helps in the management of CNS due to its Vata balancing and Medhya properties. It also aids in reducing anxiety and calming brain activity as it suppresses the central nervous system due to its relaxant properties.
- Aacharya Vagbhat stated Chitrak has antiaging and rejuvenating properties. Chitrak root powder taken with ghee and sesame oil for 1 year makes the person live for 100 years.

External Use

- For managing the skin diseases like acne, soreness, and dermatitis, Chitrak extract is helpful as it has antioxidant and antimicrobial properties.
- The antioxidant properties of Chitrak also help in accelerating the process of wound healing which helps in the formation of new skin cells.
- Its lepa is applied in diseases like Shlipada, Shotha, Shwitra Kushtha etc.

Dosage:

The ayurvedic dosage of Chitrak varies according to different forms of Chitrak products.

Precauctions while using Chitrak:

- For pregnant women, the intake of Chitrak supplements is not recommended as it suppresses ovulation, implantation and it further leads to abortion. It irritates the uterus and enhances contractions which might lead to miscarriage. Therefore, it is recommended to take some advice from the Doctors.
- The overdose of Chitrak supplements is responsible for vomiting, nausea and headache.
- Even lower dosage of Plumbagin stimulates CNS and muscles, whereas higher dosages are responsible for paralysis.

Conclusion:

This review clearly shows the importance of Citraka as a useful medicinal plant. Citraka is used from the ancient times as an important herb to treat number of diseases due to its Ama pachan and Agni deepana properties mentioned in Ayurvedic classics. This review elaborates the morphology of the plant along with its chemical composition. It includes a short review on therapeutic uses of drug as stated in ayurvedic texts. It is cleared that Chitrak when taken in proper amount acts as tonic but may be harmful in excess quantities.

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Acceptance Letter

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TITLE: CLASSICAL TEXTUAL REVIEW OF IRIMEDA

Dear Dr Shantanu Pophalikar, Dr. Ranjeet Z Patil, Dr. Laxmikant B Patil, Dr. Yuvraj Dewane

We are pleased to inform you that out of various research articles submitted, Experts/ Referees Panel of WJPMR has recommended your manuscript for publication, so World Journal of Pharmaceutical and Medical Research has been accepted your manuscript for publication in Current (April) Issue of WJPMR.

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A Critical Review on Chitrak

VIDULA AJIT RAJIGARE, LAXMIKANT B. PATIL, RANJEET Z. PATIL, AJIT S. RAJIGARE

ABSTRACT

Ayurveda is the oldest medicinal system in India. Ayurveda is a science of life with a holistic approach to health. It has ability to treat many chronic diseases such as cancer, diabetes, arthritis and asthma which are untreatable in modern medicine. Plants are the exclusive source of the drugs for the treatment of the diseases. In Ayurveda the concept of Ama is unique. Ama is said to be the root cause of all diseases. Amaya is a Sanskrit word for disease literally means that which is born because of Ama. As per Ayurveda, the Agni is essential for the maintenance of perfect health. Ama forms as a result of impaired Agni, and that, in turn, destroys Agni. Ama is a causative factor in number of diseases. So Ama pachan and Agni Deepana is very effective to improve all heath issues. For this the wonderful drug Chitraka is mentioned in our Ayurvedic texts. Plumbago zeylanica Linn.belongs to family Plumbaginaceae, commonly known as Chitrak is one of the medicinal plants used in the Indian traditional system of medicine. In this article, we are going to discuss about Chitrak & its medicinal aspect as mentioned in Ayurvedic texts.

Key Words: *Chitrak, Ama, Deepana, Plumbago zeylanica Linn,*

Introduction:

Ayurveda is the ancient medical science practiced in India since very long time. Citraka is a well recognized and reputed plant to treat number of diseases. It is very effective as agnideepak, kaphahar, arshahar, kushthhar etc. Its effect in Ama pachan and Agni deepana is proven. The word Chitrak gives us a unique resemblance to the leopard as it tears accumulated lumps like. Chitrak is one of the powerful digestive and carminative herbs of Ayurveda. It is used in most of Ayurvedic medicines for indigestion. The white variety of Chitrak, *Plumbago zeylanica Linn.*, commonly known as Ceylon leadwort, Doctorbush or wild leadwort. It is an oldest herb that was used in Ayurveda for several disorders over thousands of years.

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Latin Name:

Plumbago zeylanica Linn.

The generic name is derived from the Latin words plumbum, meaning 'lead', as this plant was reputed to cure lead poisoning. The specific epithet zeylanica means 'from Sri Lanka' which was formerly called Ceylon. Plumbago means an evergreen flowering shrub.

Synonymes:

- **Dipaka:** Due to Ushna veerya it stimulates digestive fire
- **Jarana:** Digests food
- **Citrak, Vyala:** Tears accumulated lumps like leopard
- **Agni:** Denotes its digestive property
- **Citraka:** Signifies tearing action
- **Agnika:** Due to its fiery hot nature

Vernacular Names:

1	Hindi	**Chita, Chitarak, Chitra**
2	Bengali	**Chita, Chitu**
3	Kannada	**Pellichitramula**
4	Punjbi	**Chitra**
5	English	**Ceylon Leadwort**
6	Telugu	**Chitramulam, Agnimata**
7	Farasi	**Bekha baranda**
8	Marathi	**Chitramula**
9	Gujrati	**Chitro**
10	Tamil	**Kodivel**
11	Malyalam	**Vellakotuveri**

Botanical Description:

Kingdom: Plantae

Sub-kingdom: Tracheobionta

Super-division: Spermatophyte

Division: Mognoliophyta

Class: Mognoliophyta

Sub-class: Caryophyllidae

Order: Plumbaginales

Family: Plumbaginaceae

Genus: Plumbago

Species: Zeylanica

It is a perennial bushy shrub. The plant grows upto height of about 0.5–2 m. Leaves are dark green in colour having thickness of 1.5 inch and width up to 3 inch. The leaves are alternate, simple and ovate and they consume hairy margin. Flowers are bisexual, 10-25cm long, white in colour, having diameter of 1-1.5cm, exists in bunches. Fruits have apex and contains single seed that is oblong. Root is brown in colour from outside and white from inside. In India it is scattered in central India to West Bengal, Maharashtra and Uttar Pradesh to some parts of South India.

Parts Used : Root Bark

Chemical Constituents:

1) Plumbagin
2) 3 - Chloroplumbagin
3) Plumbagic acid
4) Isozeylinone
5) Glucose
6) Fructose
7) Aspartic acid
8) Hydroxyprolin

Plumbagin is a yellow pigment that patents in members of Plumbaginaceae family. The roots contain plumbagin while the stem has a lesser volume and leaves have no plumabgin. It is natural yellow pigment because of existence of naphthoquinone pigment and is exists in the form of needles. Plumbagin is soluble in alcohol, acetone, chloroform, benzene, and acetic acid and is exceedingly toxic compound with corrosive possessions. Plumbagin has antibacterial activity in contradiction of numerous pathogenic bacteria. The methanolic extract of plumbagin shows strong antibacterial activity against Escherichia coli, Salmonella typhi and Staphylococcus aureus and inhibitory outcome in contradiction of Klebsiella pneumoniae, Serratia marcescens and moderate result in contradiction of Bacillus subtilis and less low effect contrary to Proteus vulgaris and Pseudomonas aeruginosa. The aqueous extract shows less antibacterial action as related to organic extract. Plumbagin shows anticancer, antifungal, antimicrobial activity, antibiotic effects.

Varieties:

Vagbhata stated three varieties viz., Shweta(white), Pita(yellow) & Asita(black) Chitraka.

Bhavprakash Nighantu stated three varieties viz., Shweta, Rakta & Neela Chitraka.

P. zeylanica (White); *P. rosea* L. (red) and *P. capensis* (blue).

P.V. Sharmaji described the later two varieties as *P. indica* Linn. and *P. auriculata* Linn.

P. rosea L.

P. capensis

Classical Texts:

In classical texts Chitrak is categorized in different groups considering its medicinal properties and therapeutic uses.

Charaka:

Dipaniya mahakashaya, Shulaprashamana mahakashaya, Arshoghna mahakashaya, Lekhaniya mahakashaya.

Sushruta:

Pippalyadi gana, Mustadi gana, Amlakyadi gana, Varunadi Gana, Aragvadhadi Gana. Vagbhata: Pippalyadi gana, Mustadi gana, Varunadi Gana, Aragvadhadi Gana.

Bhavprakash nighantu:

Haritakyadi varg.

Sharangdhar nighantu:

Acharya Sharangdhar mentioned that those Dravya which are used for digestion of unripe food and to initiate the digestive fire termed as Deepana- Pachan dravya, example is Chitraka.

Drug Guna:

Rasa	Guna	Virya	Vipak
Katu	Laghu, Tikshna	Ushna	Katu

Uses:

- Chitrak is vata, kapha and pitta shamak i.e. Tridoshaghna.
- ***Digestive system:*** Chitrak has Deepana (appetizer) and Pachana (digestion) properties that help improve digestive problems such as loss of appetite, indigestion, bloating, gas and dysentery or diarrhoea. Chitrak also helps manage constipation because of its Rechana (laxative) property.
- ***Liver diseases:*** It is useful in liver diseases.
- ***Grahani:*** In Grahani it is used with takra.
- ***Krumi :*** It acts as Krumighna.

- ***Arsha:*** Chitrak dosages effectively reduce painful Piles because of their pain-relieving properties due to the Vata and Pitta dosha balancing properties.
- ***Shoolhar:*** The paste prepared from the leaves of Chitrak is used for application to manage rheumatic pain because of its Vata balancing property.
- ***Shothahar:*** It reduces the swelling on the affected area due to its Vata balancing and anti-inflammatory properties and helps in wound healing.
- Due to Garbhashaya sankochaka, Garbhastravkar properties it is used in Anartava, Makkalshoola etc.
- ***Obesity:*** Chitrak has Pachan and Deepan properties that help in reducing fat accumulation, these properties are essential in managing obesity. Chitrak also reduces blood cholesterol and triglyceride levels and thereby, helps in weight loss.
- ***Diabetes:*** Chitrak root supplements help manage diabetes. The components present in Chitrak roots help enhance insulin secretion because of their anti-diabetic nature and antioxidant properties that help in lowering blood glucose levels.
- ***Respiratory system:*** Chitrak has a Kapha balancing nature which is beneficial in reducing the symptoms of cough and cold.
- ***Cholesterol:*** High cholesterol occurs due to deposition of toxins in the form of Ama, Chitrak prevents this deposition due to its Deepan, Pachan, Lekhan(scrapping) properties. Chitrak supplements are very effective in preventing the deposition of saturated fatty acids in arteries and maintaining the blood flow in the body, which avoids atherosclerosis and further reduces the chances of heart attack.
- ***CNS:*** Chitrak helps in the management of CNS due to its Vata balancing and Medhya properties. It also aids in reducing anxiety and calming brain activity as it suppresses the central nervous system due to its relaxant properties.
- Aacharya Vagbhat stated Chitrak has antiaging and rejuvenating properties. Chitrak root powder taken with ghee and sesame oil for 1 year makes the person live for 100 years.

External Use

- For managing the skin diseases like acne, soreness, and dermatitis, Chitrak extract is helpful as it has antioxidant and antimicrobial properties.
- The antioxidant properties of Chitrak also help in accelerating the process of wound healing which helps in the formation of new skin cells.
- Its lepa is applied in diseases like Shlipada, Shotha, Shwitra Kushtha etc.

Dosage:

The ayurvedic dosage of Chitrak varies according to different forms of Chitrak products.

Precauctions while using Chitrak:

- For pregnant women, the intake of Chitrak supplements is not recommended as it suppresses ovulation, implantation and it further leads to abortion. It irritates the uterus and enhances contractions which might lead to miscarriage. Therefore, it is recommended to take some advice from the Doctors.
- The overdose of Chitrak supplements is responsible for vomiting, nausea and headache.
- Even lower dosage of Plumbagin stimulates CNS and muscles, whereas higher dosages are responsible for paralysis.

Conclusion:

This review clearly shows the importance of Citraka as a useful medicinal plant. Citraka is used from the ancient times as an important herb to treat number of diseases due to its Ama pachan and Agni deepana properties mentioned in Ayurvedic classics. This review elaborates the morphology of the plant along with its chemical composition. It includes a short review on therapeutic uses of drug as stated in ayurvedic texts. It is cleared that Chitrak when taken in proper amount acts as tonic but may be harmful in excess quantities.

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