

AYURVEDIC PERSPECTIVE OF KALAMEGHA WITH ITS BOTANICAL SOURCES

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ABSTRACT

The plant *Andrographispaniculata* is a drug identified as a source plant of *Bhunimba* often referred as *Kalamegha* or *Yavatikta* mentioned in Ayurvedic literature. *Kalmegha* is indicated in *Kushta*, *Kandu*, *Shopha*, *Yakratroga*, *Krimi*, *Kushta*, *Jwara*. This drug having chemical constituents like Andrographolide, 14 – deoxy – 11, 12 – di dehydroandrographolide etc., in it. *Andrographis paniculata* is reported to have hepatoprotective, antiulcer, anti-inflammatory, antipyretic, anti-filarial activities etc.

Keywords: *Bhunimba*, *Andrographis*, Literary survey.

INTRODUCTION

Dravya being 2nd *chikitsa chatuspada* has wider and extensive utility. Different parts of the plants are used for the medicinal purpose from time immemorial. In view of the wider acceptance of herbal drug based products and fast expanding global market, the quality and genuinity of medicinal plants accounts pivotal significance for their therapeutic values. *Andrographis paniculata* is an annual profusely branched, erect herb extremely bitter in taste; therefore called as King of Bitters. It grows to a height of 30-110 cm in moist shady places with glabrous leaves and white flowers with rose purple spots on the petal. The stem dark green, 0.4-1.0 m in height, 2-6 mm in diameter, quadrangular with longitudinal furrows and wings on the angles of the younger parts, slightly enlarged at the nodes; leaves glabrous, up to 8.0 cm long and 2.6 cm broad, lanceolate, pinnate; flowers small and solitary, corolla whitish or light pink in color with hairs, in lax spreading axillary and terminal racemes or icles; capsules linear-

oblong, acute at both ends, 1.9- 0.3 cm ; seeds numerous, subquadrate, yellowish brown. Even though genus *Andrographis* consists of 28 species, among these *Andrographis paniculata* is popular.

The herb finds its reference in 26 Ayurvedic formulations and in Indian pharmacopeia as a predominant constituent. The drug *Kalamegha* has very minimal references in classical texts. The leaves and roots are useful parts and used in wide range of ailments like *Jwara*, *Kushta*, *Krimi*, *Shopha*, *Yakritroga* and *Madhumeha*. In *Samhitas* the references are available in the name of *yavatikta*, but preparations can be seen in the name of *Bhunimba*. This study attempts to explore *kalamegha* references from all the texts.

DRUG REVIEW

In *Vedakala* references are not available, but in *Samhitha kala* references are told in the context of *grahani dosha chikitsa adhyaya* of *Charaka*, *kushta chikitsa* of *Sushruta*, *prameha chikitsa* of *Astanga hrudaya*. In *Nighantukala* refer-

ences are available in the *Adarsha nighantu*¹ & *Priya nighantu*².

The text Glossary of vegetable drugs in *Brihatrayi*³, mentions that in Madhya Pradesh it is popular in the name of *Bhu nimba*, but in Nagpur area & forests of Bihar it is termed as *Chirayita*.

The word *Kalamegha* is derived from “*Vangeeya Sampradaya*”(Bengali vernacular nomenclature). From distance, it appears like a black cloud in the blue sky . Hence, it is called as *Kalamegha*⁴.

Table No. 1 SYNONYMS ACCORDING TO ACHARYAS

SYNONYMS	D.G.H ⁵	P.N
<i>Bhunimba</i>	-	+
<i>Kalamegha</i>	+	+
<i>Kalpanatha</i>	+	+
<i>Tikta</i>	-	-
<i>Yavakaraphala</i>	-	+
<i>Yavatikta</i>	+	-

VERNACULAR NAMES⁶ :

Arabic : Qasabhuva, Qasebazzarirah.
Assamese : Chiorta
Bengali : Kalamegh, Mahatita.
Chinese : Chuan Xin Lian
Deccan : Charayetah, Kalaphnath.
English : King of Bitters.
Gujarati : Kariyatu, Kiryata, Kiriya, Olikiriyat.
Hasada : Kalameg.
Hindi : Charayetah, Kiryat, Mahatika.
Java : Sadilata

Kannada : NelaBevu.
Malayalam : Kiriya, Nalaveppu. **Malaysian** : HemptuBumi
Marathi : Olenkirayat.
Oriya : Bhunimba
Persian : Nainehavandi.
Sadani : Bhunim.
Sanskrit : Bhunimba, Kirata.
Sinhalese : Hinbinkohomba, Ninbinkohomba.
Tamil : Nelavembu, Shiratkuchi.
Telugu : Nelavemu

Table No. 2 GANA / VARGA:

Nighantu's	Varga	Name
<i>AdarshaNighantu</i>	<i>Vasadivarga</i>	<i>Kalamegha</i>
<i>PriyaNighantu</i>	<i>Shatapushpadivarga</i>	<i>Kalamegha/Bhunimbha</i>

RASAPANCHAKA AND ROGAGH-NATA:

It has *tikta rasa*, *laghurukshaguna*, *usnaveerya*, *katuvipaka* and *kaphapittahara*, *deepana* and *pachana* properties. It is indi-

cated in *Jwara*, *Krimi*, *Kushta* and *Yakrutroga*.

PRAYOJYA ANGA: Panchanga

Table No. 3 MATRA⁷:

DOSAGE FORM	DOSE
<i>Churna</i>	1-3 gms
<i>Swarasa</i>	5-10 ml
<i>Kwatha</i>	20-40 ml

Table No. 4 VISHISTHA YOGAS:

SL	YOGAS	INDICATION	REFERENCE
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NO			
1	<i>Bhunimbadi Churna</i>	<i>Kamala, Jwara, Pandu, Atisara</i>	C.Chi.15/132-133 <i>Grahanidosha-chikitsa adhyaya</i> ⁸ .
2	<i>MahaTiktaka Ghrita</i>	<i>Kusta, Visamajwara, Rak-tapitta, Hridroga</i>	Su.Chi.9/8 <i>Kusta chikitsa</i> ⁹
3	<i>Tiktaka ghrita</i>	<i>Trushna, Bhrama, Daha, Pandu</i>	<i>AshtangaHridayaChikitsaSthaana</i> 19/2-7, AFI ¹⁰
4	<i>Rodrasava (Rodrasava)</i>	<i>Aruchi, Kruimi, Kushta, Grahani, Meha, Pandu</i>	<i>AshtangaHridayaChikitsaSthaana</i> 12/ 24-27 ^{1/2} , AFI ¹¹
5	<i>Chandra prabhavati</i>	<i>Anaha, Shoola, Kushta, Kandu, Kamala, Bhagandara</i>	<i>SharangadharaMadhyamaKhanda</i> 7/40-49, AFI ¹²
6	<i>Nimbadi kwatha churna</i>	<i>KaphajaJwara</i>	<i>Chakradatta. JwaraChikitsa</i> 101, AFI ¹³
7	<i>Dhanvantara gutika</i>	<i>Kasa, Shwasa, Rajayakshma, Kaphapraseka</i>	<i>Sahasrayoga Gutikaprakarana</i> 56, AFI ¹⁴
8	<i>Manasamitravai</i>	<i>Manodosha, Unmada, Apasmara, Vakdosha</i>	<i>Sahasrayoga Gutikaprakarana</i> 68, AFI ¹⁵

TAXONOMICAL**CLASSIFICATION¹⁶:****Kingdom** - Plantae.**Divisions** - Angiospermeae.**Class** - Dicotyledoneae.**Subclass** - Gamopetalae.**Series** - Bicarpellatae.**Cohort** - Personales.**Family** - Acanthaceae.**Genus** - Andrographis**Species** - Paniculata .**Powder Microscopy of *Kalamegha*****Aerial Parts :**

Characters	Description
Leaf epidermis	Fragments of epidermis with Diacytic stomata & Fairly large cystolithin epidermal cells
Trichome	Uniserate
Starchgrain	Scarse
Parenchyma Cells	Contain Cystolith

Powder Microscopy of *Kalamegha* Root Parts :

Characters	Description
Calcium oxalate crystals	Abundant
Xylem vessels with crystals	Present
Starch grains	Scattered
Lignified fibers with pointed ends	Present
Vessel elements with bordered pits and inter vessel pitting in alternate position	Present
Parenchyma	Present

DISCUSSION

Ancient texts identified the drugs through synonyms. Indirect references are

available in *brihatrayis*, references of *kalamegha* as such is found in *Priya nighantu* and *Nighantu Adarsha* which describe *Kalamegha* with *Bhunimba*, *Yavatiktika* as synonyms. Morphology, colour, shape of the fruits and bitter taste suggests the identification of the drug. The synonyms and references in the current literature suggest *Andrographis paniculata* as the source for *Kalamegha*. In *Samhita kala yavatiktika* and *Shankini* terms were mentioned.

Dalhana comments on *yavatiktika* and states that plant growing in *yava pradesha*, fruit resembles *yava*. It consists of 7 or 8 leaves, and are bitter in taste, and it is termed as *Yavantika*.

Dridabala points out *Yavatiktika* and *Shankini* are different; because the therapeutic values of *Yavatiktika* and *Shankini* are different.

The word *saptalika* in *Sushruta samhita* is mentioned but the commentator has opined *saptalika* as *yavatiktika*. According to all *nighantus* like *Nighantu Ratnakar*, *Dhanvantari Nighantu*, *Raja Nighantu*, *Shaligram Nighantu*, the term commonly accepted as *yavatiktika* and recent *Nighantus* like *Nighantu Adharsha*, *Priya Nighantu* accepted as a *Kalamegha* and *Bhunimbha*.

According to *Bapalal Vaidya*, while explaining the controversy of *Kalamegha*, the Green variety like *Chirayata* was found in Gujarat which is known as *Kalamegha*.

Bhunimba is accepted as a synonym of *kiratatiktika* (*chirayita* – *Swertia* species) and *Andrographis paniculata* which is sold in the market as its substitute or adulterant or by the name of *Deshi-chirayita* and *kalamegha* also. *Andrographis paniculata* is locally known as *bhunimba* in Madhya Pradesh and *bhunimo* in Orissa. In high himalayan regions so called *kiratatiktika* is *Swertiachirayita*; here other bitter species

of *swertia* are also used as *Kiratatiktika*, but commonly called as *Deshi chirayita* is *Kalamegha*.

Kalamegha is attributed with *tikta rasa*, and *katu vipaka* which substantiates its indication in *Kushta*, *Kandu*, *Yakratroga*, *Krimi*, *Jwara*. It is one of the ingredients of important formulations like *Bhunimbadi churna*, *Mahatiktaka ghrita*, *Chandraprabha vati*, *Dhanvantara gutika* and *Manasamitra vati* etc. As the drug finds its utility in these *yogas*, the potency of the drug plays an important role in achieving the therapeutic efficacy.

CONCLUSION

In classical text *Andrographis paniculata* is identified as *yavatiktika* which is the synonym of *Andrographis paniculata*. *Priya nighantu* and *Adarsha nighantu* also identify *Andrographis paniculata* as *Kalamegha*. In different geographical region *Andrographis paniculata* is termed as *Bhunimba*, *Kiratatiktika*, *Bhunimo*, *Desi chirayita* etc.

It can be concluded from the over review that *Andrographis paniculata* is the source plant of *Kalamegha*.

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Description of plant Kalamegha



Leaf



Stem

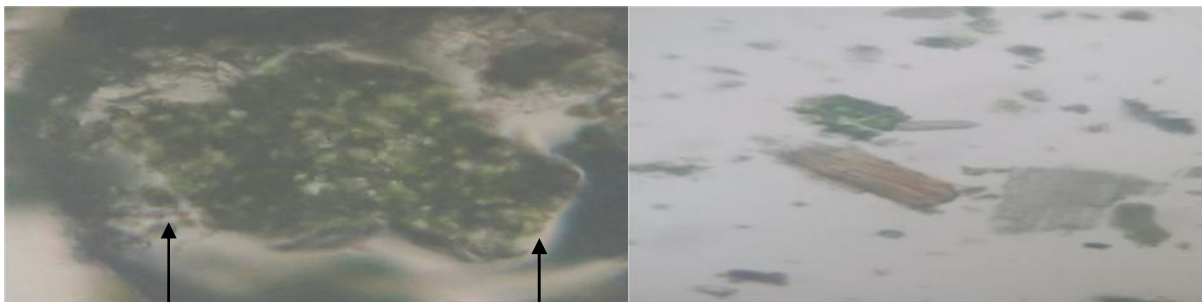


Flower



Fruit

Powder microscopy of Kalamegha - Aerial parts



Lamina Trichome

Vascular bundle

Powder microscopy of Kalamegha - Root Parts



Paranchymal cells

Starch grains

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