



ROLE OF ULATKAMBAL (DEVIL'S COTTON) ON DYSMENORRHEA

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ABSTRACT

A plant, due to its morphological appearance of the flower named Pishacha karpas. It's hindi name is Ulatkambal, and Latin name is *Abroma Augusta*. It's also known as Devil's cotton in English. This plant is full of medicinal value, especially for gynecological disorders. Such as – Dysmenorrhea, amenorrhea, sterility, anovulation etc. numerous studies are carried out on its rheumatic pain, headache with sinusitis and in antidiabetic effect. Almost each and all parts of this plant are used for the treatment of various disorders. This plant belongs to *the malvaceae* family and has one or two species from Asia and Africa. *Abroma Augusta* has been claimed to possess the majority of biological activities. Biochemical profiling of this plant demonstrates the presence of important phytochemicals like alkaloids, abromin, sterol, abromasterol, taroxerylacetate, taraxerol and bita-sitosterol which is very useful in treating uterine disorders.

The aim of this review was to analyze the published report based on the medicinal value of *abroma Augusta* as well as to provide updated information about the ethnomedicinal, pharmacological as well as the phytochemical properties.

Keywords: *Abroma Augusta*, Devil's cotton, Ulatkambal, phytochemical properties,

INTRODUCTION

Of course, in this Modern era, some health problems can be easily controlled. Still there are some, for which it is a little difficult to manage the symptoms while for some health problems, no treatment is available. Women face more health problems as compared to men. So, women must be extra cautious about their health. *Kashtata* (Dysmenorrhea) is one of the familiar Gynecological disorders observed among women. It has been described as a symptom of numerous diseases such as *Kukshishoola*, *vatala yoni*, *Udavartini yonivyapada*, etc. in *Ayurvedic classics*.¹ *Acharya Charaka* has specially mentioned that none of the gynecological disorders can arise without the involvement of vitiated *Vata dosha*.² Thus, leading to Dysmenorrhea where *Vata dosha* gets vitiated due to faulty lifestyle and suppression of natural urges.³ According to modern medical science, Dysmenorrhea is categorized into two divisions-(a) **Primary Dysmenorrhea**.

(b) Secondary Dysmenorrhea.

Women with primary dysmenorrhea have abnormal contractions of the uterus due to a chemical imbalance in the body. For example, the chemical prostaglandin controls the contractions of the uterus. Primary dysmenorrhea refers to menstrual Pain without pelvic pathology. This usually appears within 1-2 years of menarche, when ovulatory cycles are established. This disorder affects younger women but may persist into 40s. the pain of primary dysmenorrhea usually begins a few hours before or just after the onset of menstrual period and lasts 48-72 hours. The pain is similar to labor, with suprapubic cramping, and may be accompanied by lumbosacral backache,

pain radiating down the anterior thigh, nausea, vomiting, diarrhea, and rarely syncopal episodes. The pain of dysmenorrhea is colicky in nature.

The most common cause of Secondary dysmenorrhea is endometriosis, followed by adenomyosis and intrauterine devices.⁴ It is cyclic menstrual pain that occurs in association with underlying pelvic pathology. The pain of secondary dysmenorrhea often begins 1-2 weeks before menstrual flow and persist until a few days after the cessation of bleeding.

In *Ayurvedic classics Kashtata*(Dysmenorrhea) is not described as a separate disease. It is considered as a symptom in many diseases as *Vataja Artva dushti*, *vataja yoni vyapad*, *Udavartini*, etc. *acharya charaka* has mentioned that none of gynecological diseases can arise without infirmity of aggravated *Vata*.⁵ *Vata* is the main associated factor, though other *Doshas* only present as *Anubandh*, i.e., associated factor to it. This pain is the result of aggravation of *Vata* due to *Apanavayu*, *Margavarodha*, or *Dhatukshaya*⁶. This has been termed *kashtartha* (Dysmenorrhea). It could be found in various classical literatures mentioned symptoms in various diseases, but the description is scattered. Few references are mentioned in table below-



Classical texts	Symptoms	References
<i>Charaka Samhita</i>	Pain and difficulty in menstruation	<i>Vatala yonivyapada</i> , ⁷ <i>sannipatika yonivyapada</i> , ⁸ <i>paripluta and mahayoni vyapada</i> , ⁹ <i>Udavartini yonivyapada</i> , ¹⁰ <i>vataja asrigdara</i> , ¹¹ and <i>kaphaja asrigdara</i> , ¹² respectively.
<i>Sushruta Samhita</i>	Pain and difficulty in menstruation	<i>Udavarta yonivyapada</i> , ¹³ and <i>artava dushti</i> , ¹⁴ respectively
<i>Ashtanga sangraha</i>	Pain and difficulty in menstruation	<i>Udavarta yonivyapada</i> , ¹⁵ and <i>vataja artava dushti</i> , ¹⁶ respectively.
<i>Ashtanga hridaya</i>	Pain and difficulty in menstruation	<i>Udavarta yonivyapada</i> , ¹⁷ and <i>vataja artava dushti</i> , ¹⁸ respectively
<i>Madhava nidana</i>	Difficulty in menstruation	<i>Udavarta yonivyapada</i> , ¹⁹
<i>Bhavaprakasha</i>	Difficulty in menstruation	<i>Udavarta yonivyapada</i> , ²⁰

So, to get rid of such an ailment one such marvelous drug is *Abroma Augusta*(*Ulatkambal*) which is also known as Pishacha karpas due to morphological structure of its flower.

In Ayurvedic classics Kashtartava (dysmenorrhoea) is not described as a separate disease

because women were not suffering much from this problem in that era because of pinpointed.

Ritucharya & Rajasvalacharya. According to Ayurvedic text there are many other diseases in which Kashtartava is considered and is described as a symptom. Hence, this study is particular.

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This plant has a long history of medicinal uses. It is used as uterine tonic and an emmenagogue. *Abroma Augusta*(*Ulatkambal*) is a uterine stimulant and is specially indicated in amenorrhoea and oligomenorrhoea as recommended by Indian Ayurveda. Due to its pain-relieving property, it is given in Dysmenorrhoea.

AIM

(A) To acknowledge the pharmacotherapeutics of *Ulat Kambal* from an ayurvedic perspective.

Properties: -



(B) To research its gynecological effect from available research using the tool of Reverse Pharmacology.

METHODOLOGY

A careful study was done from available literary data. *Nighantus* like *Bhavaprakash Nighantu*, *Adarsh Nighantu* and reference books like *Dravyaguna Vijnana* of PV Sharma , D.S Lucas , K. Niteshwar , L. Hegde , *Dravyaguna Mimansa* by Vd. Shripasad Bavadekar and Published article were referred.

***Ulat Kambal*²¹⁻²⁶ Synonyms : Pivari , Yoshini**

Latin Name : *Abroma Augusta*

Family : *Malvaceae*

Sanskrit Name : *Pishacha karpas*

Hindi Name : *Ulat Kambal*

English Name : *Devil's Cotton*.

A. Habitat. It is cultivated all over India, more commonly in the tropical regions specially in hotter and moist part of Punjab, Uttar Pradesh, Assam, Meghalaya, Arunachal Pradesh, Tripura etc.

B. Habit.

A large shrub: -1/2 metre tall and 5-6 meter high .

Stem : - Vinaceous purple, softly pubescent.

Leaves: - Alternate, simple.

Flower: - Attractive , vinaceous purple

-Staminal tube short

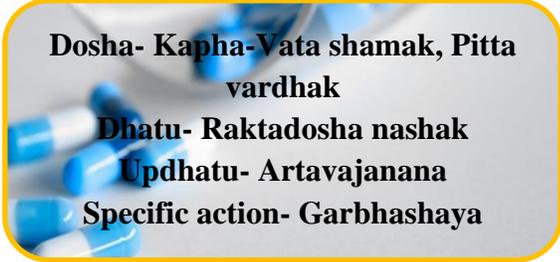
-Staminodes petaloid

Fruit: -Aturbinate , five angled, locular and winged conical truncate capsule of 4-5 cm long.

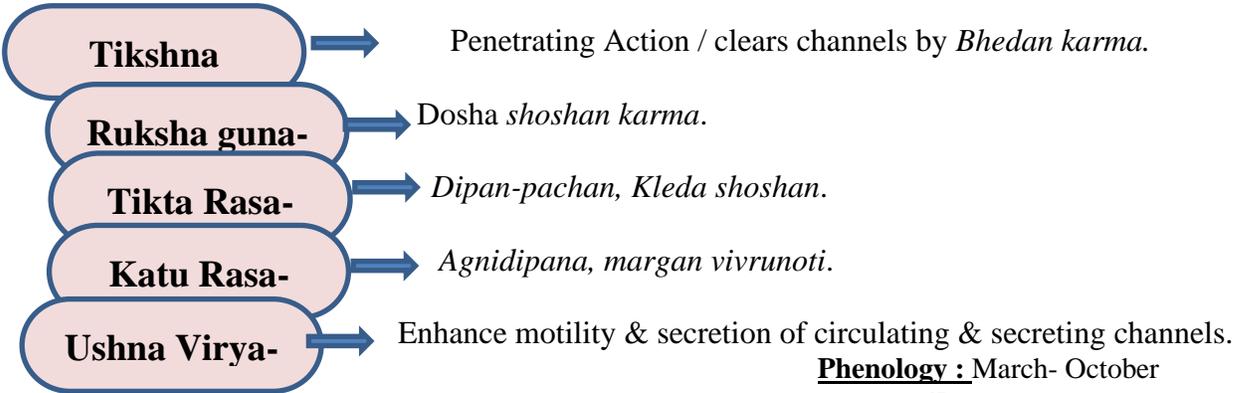
Seeds: -Many and black in colour.

Parts used: -Root(Mool), Patra(leaves).

Pharmacological actions –



Mode of Actions –



Administration time – from 3 days prior to menstrual flow to 2 days later to flow.

Indications – *Kashtata, Rajorodh, Yoni vyapat.*

Chemical constituents

Primarily the plant contains alkaloid.

Root bark: mixed oils, resins, alkaloids, water soluble base.

Roots : Abromine, Friedelin, abromasterol, choline, betaine.

Leaves: Taraxerol and its acetate, beta sitosterol acetate.

Stem bark: beta sitosterol, friedelin.

Heart wood: bita sitosterol.

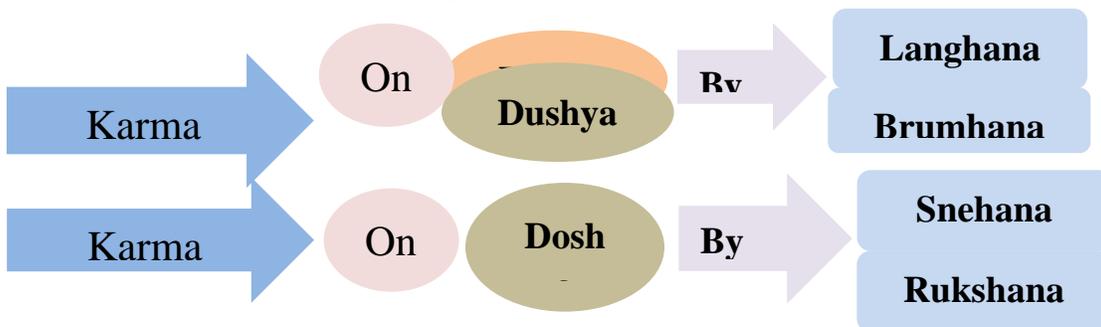
Seeds: Fixed oil like linoleic acid.

Dosage: *Mooltvak choorna-* 1-3 gms

Mooltvak swaras- 30-50 ml

Patra swaras- 10-20 ml

The mode of actions of Dravya’s -



Phenology : March- October

Toxicity ²⁷

The plant extract had no adverse effects in single dose, indicating the medium lethal dose could be greater than 2000mg/kg body weights in rats. There are no behavioural or neurological changes noted.

Gynecological Aspect ²⁵

Some studies have shown that the ethanolic extract of leaves and stems of *Ulatkambal* are noted to be used in menstrual disorders and diseases of uterus. It exhibits contractile action on the uterus and is used for the treatment of dysmenorrhea, amenorrhea, sterility and another menstrual disorders.

Pharmacodynamic of *Ulatkambal* from an *Ayurvedic perspective* with respect to its gynecological action

The overall pharmacodynamics of a drug is known as *karma*. A drug is potentially efficient to alter the rate at which any bodily functions proceed. This is the exact role of *karma* in any science.

Ruksha guna²⁸ of this drug controls the excessive secretion from various organs of body.

Ushna guna or ushna virya²⁸ enhances the motility and secretion of various circulating and secreting channels.

Tikshna guna²⁸ has penetrating action which clears out the channels by its *bhedan* actions.

Katu rasa²⁸ has specific *Dhatukarma* like *Agnidipaka*, *margan vivrunoti*(clears the channels).

Tikta rasa²⁸ is *dipan pachan*, *kleda soshana*. *Updhatu* of *rasa* is *artava*. and *rasa dhatu* is spirit of nutrition that circulates in the body, the nourishment to *artva* comes from *rasa dhatu*. Therefore, any factors which hindered optimum metabolism of *Ahar* leads to malformation of its *updhatu* i.e, *Artava* which appears in menstrual disorders.

DISCUSSION

The *Sara bhag* of food is transformed into *Rasa* by the action of *Agni*. And this *Rasa dhatu* is circulated through *rasa vaha srotas* in the body and further transformed into successive *dhatu*s by *dhatvagni* and so on chain of transformation continues. Factors which causing menstrual problems are 1. Improper metabolism of *Ahar rasa* resulting in malformation of *Artva*. 2. Any kind of blockage or obstructions of channels(*artavaha srotasa*) in the flow of *artva*.

Ulatkambal has *Tikta* and *Katu rasa* which are *Dipana* and *Pachana* in nature. This secure the *jatharagni* is ignited and metabolism is restored. *Katu rasa* clears the channels.

CONCLUSION

Ulatkambal is a traditional plant found mostly in Up, Punjab, Assam, Arunachal Pradesh and Tripura. It is claimed that aerial parts of *Abroma Augusta* have been used to treat joint pain, asthma, sinusitis, tonsillitis, back pain, diarrhea and influenza. Based on these data, the plant may possess analgesics, antipyretic and anti-inflammatory activities. Our Ayurvedic literature also talks about this rare plant and its property. As Due to such miraculous *rasa*, *guna*, *virya* and

vipaka of *Ulatkambal plant*, *srotodushti* (either *rasavaha* or *annavaha*) is not only get repaired but also get regulated. Each and every part of this plant is of medicinal value and beneficial to the human body.

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