



A Review on Controversial herb *Brahmadandi* (*Tricholepis glaberrima*. DC)

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ABSTRACT

‘*Sandigdha dravyas*’ is a term used for medicinal plants having controversial botanicals as a source. The *Ayurveda* and *Sanskrit* literature describe a herb with names, which do not precisely indicate the botanical source but many times attribute the therapeutic utility of the plant.

Brahma-dandi is a such a plant which got added to *Ayurvedic* materia medica i.e., *Dravyaguna vinyan* after 10th century hence less explored. Now-a-days its phytochemical analysis and pharmacological activities are being studied. This plant has great importance due to its nutritive value and a significant source of medicine. Brahma-dandi is mostly used for its aphrodisiac property¹ but several unknown activities need to be taken seriously.

Keywords: *Brahmadandi, Utkantaka, Arishta, kambu-vanamalini*

Introduction

The description of Brahma-dandi is not found in *Brihatrayi* (*Charaka, Sushruta & Vagbhat*). Its description is found in very few *Nighantus* which means that this plant would not have been included in *Ayurvedic* text before 14th century. Probably it was *Pandit Narhari* who included this plant in his book ‘*Rajnighantu*’; a well-known materia medica of *Ayurveda*. Later on, this got included in *Vaidyamanorama, Nighantu Ratnakar, Shaligram Nighantu, Nighantu Adarsh*.

The botanical identification of Brahma-dandi is *Tricholepis glaberrima* DC. Brahma-dandi has got Sanskrit names like *ajaladandi, Kantakapatrafalaa, ajadandi*³ in *Ayurvedic* texts.

It is *Ushna veerya dravya* with *Tikta*³, *Katu, rasa* in nature. It has been said to possess *Katu vipaka* which diminishes the *Kapha & Vata dosha* predominated diseases like *Shopha* (Inflammation)¹²

Botanical Description

It is stout annual erect herb,⁴ quite smooth, greyish with purple bracts erect, motabor⁵ Leaves sessile, linear, oblong or lanceolate, acute entire, spinous, bristle⁵ toothed or spinous serrate, punctuate, base of cauline leaves not or rarely uricled; midrib & nerves very prominent beneath. Heads 6.8mm long, ovoid, glabrous.



Flowers small and slender, with a ringhair at the base of lobes. Pappus: shorter than achenes, copious, yellowish-brown rigid, sub paleaceous. Achenes oblong, faintly ribbled^{6,4}

Distribution

It is found around West Rajputana, Mount Abu, Central India Konkan, Deccan, Western Ghat in Bombay Presidency, Hills of Mysore* Mahabaleshwar. It often grows on cultivated fields* rocky soil of grasslands.⁷

Vernacular Names -Guj – fusiyaaron, Talakanto,⁶ tilkatta⁸

Farasi – badaavarda^{4,6}

Marathi – Bothamore, Dahan

Bangla – Chhaagaldandi, Vamanadandi^{4,6}

Kannada – Brahma-dandi⁹

English – Thistle, Smooth *Tricholepis*

Botanical Name – *Tricholepis glaberrima* DC

Family: *Compositae*

Tricholepis is a Greek word meaning *thrix*, *trichos*=hair, and *lepis*, *lepidos* = scale.⁶

This genus was established by de Candolle (1838) with five species¹⁰

The name *glaberrima* is derived from latin origin glaber which means bald, without hairs; (superlative) very smooth, completely glabrous.

Hence the complete name *Tricholepis glaberrima* was established.

Part used: The aerial part, whole plant and sometimes bark of roots

Character of the market sample – Drug of pale brown colour consisting of pieces of stems slender, round, furrowed, slightly hairy, soft and containing a white pith: flower heads conical and surrounded by numerous bristly bracts. Within these or in the middle of the flower heads are numerous down like serrated pappus white in colour and surrounded on seeds which are erect, wrinkled, furrowed and of a darkish brown colour; taste bitterish. The flowers smell like charmoline.¹¹

Why it is called Brahma-dandi?

Jayakrishnaji bhayi has discussed it in the Vaidyakalpataru (Pu 23 Vol2, pp49)

Bhramavaat (is a type of *unmaada*) is treated with this plant effectively. Whole plant is grinded with 7 seeds of black pepper and given to patient orally in liquid form. It has been seen that within ten days it showed very positive effect, whereas after 20 days of use, the patient started to recognize the persons properly with normal behaviour. Hence it is said that this plant treats the disease *Bhramavaat* effectively so got justification about naming it as a Brahma-dandi.¹²

Uses in Ayurveda

Brahma-dandi has been attributed to overcome *daurbalya* (generalized weakness) *Kaasa* (cough) *shvitra* (leukoderma), *chamaroga* (skin disease) and *shopha* (swellings) and act as *vrishya* (as aphrodisiac). It is believed that this plant is aphrodisiac which provide strength to sexual organs and is used for ailments related to sperm also.¹³

Uses in Yunani system

In Yunani system of medicine it is believed as a hot and rough plant. It is blood purifier which ultimately nourishes the skin, heals wound, act as face glow promoting drug. It is useful in leprosy when taken with black paper for a term of 40 days along with bread of gram flour as a regular diet. It promotes the intellect and speech when taken with cow milk. It increases libido as well as delays ejaculation also. It is also claimed to be beneficial in haematuria like condition, burning micturition, maintaining the natural colour of urine. Post labour pain in uterus is treated with this plant.¹⁴

Properties and uses:

It is believed to be a nervine tonic and an aphrodisiac and is used in seminal debility.¹⁵ The herb is believed to possess antiseptic properties and is employed in the disease of skin.¹⁶ The root bark is stated to be employed in urinary trouble and cough.¹⁷ It is aromatic bitter plant which cures hysteria.

For sore throat, inflammation, contact therapy, stem pieces with phyllocephalum phyllolaneum tied around the neck. Root paste used as antidote against snake bite, powder plant for the treatment of leprosy. As a Veterinary medicine, whole plant is crushed to treat abdominal distention and diarrhoea, also used as an antipyretic^{18,19} for regularizing the malfunction of pancreas, malaria, skin grains, aphrodisiac, stomach pain, blood purification and dysentery.¹⁹ Twice a day leaf paste is used for leukoderma and eczema²⁰ it is used as folk medicine for treatment of cancer, skin diseases and it act as best tonic for internal use to get rid from exhaustion.²¹

Phytochemical constituent

The aerial part contains sesquiterpene, lactones, cyneropirin, and 11, 13 dihydrodesacylcynaropicrin.²² Cycloartenol derivatives – sterols, isolated from the plant sources that contain conjugated ketone or allylic alcohol features in the sterol side chain. The plant is rich in many pharmaceutical active ingredient like flavonoids, triterpenoids, saponin glycosides and sterols.^{23,24}

How Brahma-dandi Became controversial

Correct information is often become problematic since plants are known by a variety of vernacular names. One of the such plant is Brahma-dandi.

A literature search revealed that different plant is available in the market under the name Brahma-dandi viz. Brahma-dandi of Southern India is *Argemone mexicana*. This plant known as Brahma-dandi in Madras and Brahma dundoo in Tamil. Even in Kerala this plant known as Brahma-dandi. The whole plant is being used by them. It is considered as brain tonic.

Brahma-dandi is totally different plant from the all over the India except South India. Its scientific name is *Tricholepis glaberrima* (Compositae). In the place of this *Voluntarella divaricata* (Compositae) is used by many.¹²

Its current representative is *Tricholepis glaberrima* (DC) and possible representatives are *Argemone mexicana* Linn., *Echinops echinatus* Roxb., *Voluntarella divaricate* and *Xanthium strumarium* Linn¹²

Possible representative of Brahma-dandi**1] *Echinops echinatus* Roxb.**

Ayurvedic name—*Utkantaka*

English name—Globe thistle

Family – Compositae

Habitat— India



General Description—arachnoid beneath, heads a compound, forming a spherical ball, 3-4cm in diameter, having single bisexual white floret.

Involucre surrounded by strong white bristles, resembling pappus; bracts tri cuspidate, sharp spinose; inner bracts 6-7mm long, connate; white, tubular, 5-lobed. Achenes obconic, densely villous, pappus bristly deciduous. (Somashekar & Mishra, 2007).

Chemical constituents: Alkaloid echinozolinone, flavones, flavone glycosides & flavonoids, apigenin, echinacin, echinoside

Part used: Whole plant

Pharmacological activity: Antifertility (Sharma, Mishra & Mehta, 1988), Antifungal (Singh et al., 1988),

Anti-inflammatory (Singh et al., 1989)

Anti-microbial (Sharma & Mehta, 1989)

2] *Argemone mexicana*

English name: Mexican poppy,

Ayurvedic name: *Kanchana kshiri, katuparni*

Family: *Papaveraceae*

Habitat: *A. mexicana* is a species of poppy found in Mexico & now widely naturalized in the United States, India & Ethiopia.



General Description: A strong branched prickly annual herb, 60-90cm in height latex; leaves simple, sessile and spiny. **Flowers** – larger, bright yellow, terminal on the short leafy branches; fruits prickly capsules, oblong –ovoid, opening by 4-6 valves; seeds numerous. (Issar, 1995)

Chemical constituent: Alkaloids: protopine, berberine & argemonine, alkaloids, jatrorrhizine, columbinine and oxyberberine (Santra & Saoji, 1971)

Action: *Sukhavirechana* (mild laxative)

Therapeutics: *A. mexicana* pacifies vitiated pitta, guinea-worm infestation, skin diseases, itching, inflammations, all types of poisoning, constipation, flatulence, colic, malarial fever and rootpowder is used in tapeworm infestation. Latex obtained from the plant is used as application to corns.

Part used: Whole plant

Pharmacological activity: Wound healing (Patil, Jalalpuri & Ali, 2001)

3] *Xanthium strumarium* Linn.

Syn: *Xanthium canadense* (Mill)

Ayurvedic names: *Arishta, kambu-vanamalini*

Common names: rough cocklebur

Family: Compositae

Habitat: The plant is probably originated in North America and has been naturalized elsewhere.

General Description: *X. strumarium* is an annual herb with a short, hairy stem. **Leaves** broadly triangular-ovate or suborbicular; **flower** heads in the terminal and axillary racemes; white or green; numerous; male upper most; female ovoid, covered with hooked bristles; **Fruit** obovoid, enclosed in the hardened involucre, with 2 hooked beaks and hooked bristles. Flowering time in India is August –September.



It can be propagated through seeds. This weed is easily dispersed through animals as the fruits have hooked beaks (DasGupta & Kundu 1963, Reeta et al., 2010)

4] *Voluntarella divaricate*



It is almost like the *Tricholepis glaberrima*.

This is found efficacious in the treatment of insanity.

This can be taken as a representative of Brahma-dandi.

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