

# Therapeutic uses of *Centella asiatica*

(*Hydrocotyle asiatica*)

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## ABSTRACT

*Centella asiatica* is a profusely branched prostrate herb consisting of active principles such as Vallarine, Asiaticoside, Sitosterol, Tannin, Oxy –asiaticoside. Asiaticoside is used in the treatment of leprosy. Sitosterol and tannin possess antiprotozoal & spasmolytic property. According to Siddha literature, its leaves are used in the treatment of syphilis, all types of fever, children's abdominal disorder, elephantiasis and hydrocele and these features are highlighted in this article.

## MORPHOLOGICAL FEATURES

CLASS	: Dicotyledenae
SUB –CLASS	: Polypetalae
SERIES	: Calyciflorae
ORDER	: Umbellales
FAMILY	: Umbelliferae (Apiaceae)
GENUS	: <i>Centella</i>
SPECIES	: <i>asiatica</i>

## SOME OF THE VERNACULAR NAMES

ENGLISH	: Indian penny wort
TAMIL	: Vallarai, Yoshnavalli, Chandaki, Pindeeri
SANSKRIT	: Mandookaparni
HINDI	: Brahmi
BENGALI	: Tholkari
ARABI	: Artniya –e- hindi
MALAYALAM	: Kudakam

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HABITAT :

Centella, a genus of about 33 species of herbs inhabiting tropical & sub tropical regions. The generic name has been derived from the Latin word “CENTUM = HUNDRED” referring to profusely branched prostrate herb which is a native of Madagascar. It is commonly found in rice fields along the bunds of irrigation channels.



HABIT:

Perennial herb

ROOT:

The plant consist of vertical root stalk

STEM:

Stem is prostrate slender, creeping with long stolens and nearly glabrous or hairy on young parts.

LEAVES:

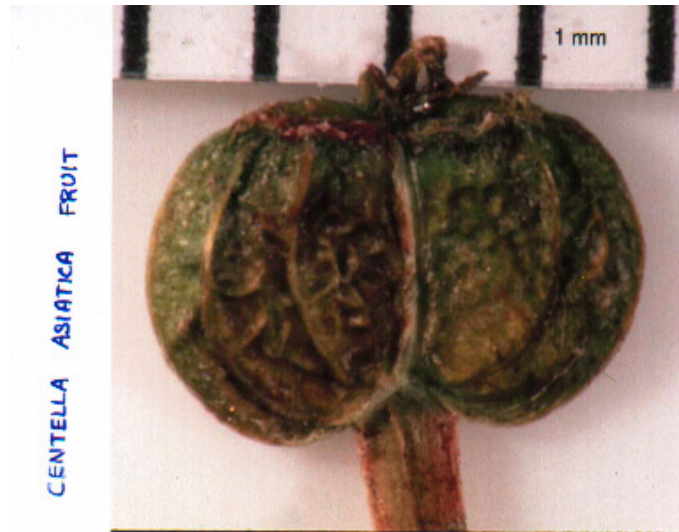
Leaves are cordate or hastate or orbicular or reniform or sub entire or palmately lobed consisting of long petiole and small stipules.

Crowded leaves can be seen at nodes, consisting of very long stalks and sheathing leaf bases Leaf blades are dentate, crenate with thick radiate veins and dark green in colour Leaves are glabrous on both surfaces.

FLOWERS:

Flowers are small, sessile and dark pink in colour. They arise as simple umbels of 3 – 6 flowers at the ends of slender peduncles arising from the axils of leaves and much shorter than petioles supported below by an involucre of 2 –boat shaped membranous persistent bracts.

FRIUTS:



Clusted at joints. Carpels oblong, sub – cylindric curved and less in length much laterally compressed, readily separating into 2 indehiscent halves (mericarps) united by a very narrow plane of junction. Vittae are seen in the furrows of each mericarp.

The fruits when bruised have an aromatic odour, pungent, nauseous and bitter taste.

SEEDS:

Solitary in each mericarp, pendulous embryo, laterally compressed.

PHARMACOLOGICAL FEATURES:

Parts Used in Medicine	:	Whole plant
Taste	:	Acrid, Bitter, Sweet (Thuvarpu, Kaipu and Inippu)
Unmetabolized Pharmacologically		
active ingredient:		cool natured (Thatpa veeriyam)
Metabolized Pharmacologically		
active ingredient:		Sweet (Inippu)

CHEMICAL CONSTITUENTS :

Vallarine	Asiaticoside	Hydrocotylin	Pectic Acids
Steroids	Hersaponin	Bacogenin	Monnierin
Triterpene	Tannin		

ACTIONS OF ACTIVE PRINCIPLES :

1) *VALLARINE* :

A bitter principle which is present in the leaves and roots of this plant is an oily liquid of a pale colour, soluble in alcohol, ether and caustic ammonia. It is believed that its active properties reside in this principle.

2) *ASIATICOSIDE* :

Asiaticoside has been shown to be active in the treatment of leprosy. It probably acts by dissolving the waxy covering of bacillus leprae. The bacillus thus become fragile and may easily be destroyed. . Leprosy nodules are broken down, diffuse infiltrations do disappear. Perforating ulcers and lesions on the fingers heal and most remarkable of all, eye lesions are cured if treatment is given before the posterior chamber of eye is involved. These improvements are seen in cases of anaesthetic leprosy and it is not really evident in tubercular leprosy.

3) *OXY-ASIATICOSIDE* :

It is prepared by permanganate oxidation of asiaticoside. Along with asiaticoside it is employed in the treatment of certain types of tuberculosis.

4) *SITOSTEROL, TANNIN* :

From the alcoholic extract of the herb, an essential oil green in colour possessing the strong odour of herb which is known to have antiprotozoal and spasmolytic effect have been reported.

*CENTELLA ASIATICA –A PANACEA DRUG*

Centella asiatica is an all healing drug of mighty potency and capable of rejuvenating the system thus enabling to live for ages.

When centella taken as a panacea drug, it is said to have remarkable power in increasing intelligence.

*GENERAL ACTIONS:*

Alterative	Stimulant	Refrigerant	Soporific
Emmenagogue	Nervine tonic	Cardiac tonic	Stomachic
Carminative	Diuretic		

Some practical applications of Centella asiatica.

1) For Syphilis :

When internally given, the leaves have a effect on syphilitic skin diseases and in secondary and constitutional syphilis especially in those cases where subjacent cellular tissue are principally affected.

2) As a memory tonic :

when the leaves are taken as a tonic, it increases memory power. It is also taken as tablets for increasing intelligence quotient (I.Q.)

3) For Dysentry :

The root of Centella asiatica when given with milk and liquorice arrests dystentry.

4) For all types of fevers

The leaves of Centella asiatica, Ocimum sanctum and pepper are grinded and are made into tablets and are taken twice a day.

5) For Children's abdominal disorders:

The ghee of Centella asiatica and the decoction made out of fenugreek and Centella asiatica leaves are reported to have a good effect.

6) For elephantiasis and hydrocele

Its leaves are grinded and are applied on particular area.

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