



The Castor Plant–A Review

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Abstract-

Castor plant is widely available everywhere. In *Ayurveda* it is known as *Eranda*. It belongs to the family Euphorbiaceae. Castor oil is used as a purgative, laxative in *Ayurveda*. This activity of the plant is due to the important phytochemical constituents like flavonoids, saponins, glycosides, alkaloids and steroids etc. Castor oil contains ricinoleic acid, it is used in all types of rheumatic activity. Castor plant is used in cases of dandruff, hair fall, it has good results. Castor plant is a very useful herbal drug in our science not only traditionally it has a very good effect in medicine also. In pharmacology it has so many other effects like anti-analgesic, anti-inflammatory, purgative, hepatoprotective etc.

Key words: castor, purgative, hair fall, rheumatic.

Introduction-

Ricinus communis, belongs to the family Euphorbiaceae, some important synonyms are given in classics according to morphology like based on leaf *Gandharva hasta*, *Panchangul*, *Hastiparnaka*, *Dhirghdanda*, *Uttana patra*. Few synonyms are given in classics based on flower like *Aamanda*, *Vyadambaka*, *Vyaghrapuchha*. Other like based on seed, like *chitra beej*. And few synonyms are action based like *vatari*, *urubaka*. The castor plant is a very important plant. In castor plant very useful chemical compounds are present that are used not only for medicinal purposes it is used traditionally also. Some where it is known as in different languages like in Hindi *Eranda*, in Kannada *Haralu*, Malayalam *Chittamanakku*, Marathi *Erendi*.

Botanical description: The *Eranda ricinus communis* (Linn.) is a tall glabrous branched shrub of almost a small tree, 2-4 m high, in the stem and branches green when

Taxonomy

Kingdom – Plantae

Class – Dicotyledons

Sub class – Rosidae

Order – Unisexuales

Family – Euphorbiaceae

Genus – *Ricinus*

Species – *Communis*

Gana vergeekarana

Charaka- Madhura skanda

Angamarda prasamana, bhedana, swedopaga

Sushruta- Vidari- gandhadi, Adhobhaghara, Vatasanshamana

Bhava prakasha Nighantu - Guduchyadi varga

Raja Nighantu- Shalmaladi varga

Priya Nighantu- Shatapushpadi varga

Kaidev Nighantu- Oshadhiya varga

Madanpala Nighantu- Panneya varga
Shodhala Nighantu - Shatapushpadi varga

Habit-

Leaves- Alternate, broad, palmately lobed and veined.
Simple, acute, Serrated margin
Leaf with triangular segments.
petiolate with multicostate reticulate venation.

Flower

Monoecious,
Female flowers pedicellate and incomplete.
Male flowers towards the lower portion of the inflorescence and female towards the upper portion.

Fruits

Globose oblong explosively dehiscent.

Seed

Carunculate, Oblong, 1 cm long with smooth mottled surface and hard crustaceous testa.
Endosperm is oily.

Variety

According to Dhanwantari Nighantu, Bhavprakash Nighantu, Shodhala Nighantu, Kaideva Nighantu, there are twos varieties of Eranda.

Sweta Eranda

Ratka Eranda

Raja Nighantu-

Sweta Eranda

Rakta Eranda

Sthula Eranda

The stem and leaves of red variety is red in colour and oil of red seeds is mostly used.

White variety contains two kinds – small and big, & leaves, seeds, roots, etc of small type are considered to useful in medicine.

Cultivation

Castor seed is a crop of tropics, though it is cultivated in the sub tropics of some extent.

Castor can with stand dry arid climate as also heavy rains and floods .

It is generally grown on sandy or clayey deep red loams and on good light alluvial loams.

It can be grown economically even on gravelly and poor soils.

The time of sowing castor is June – July or September – October.

The seed is usually sown in lines 1 – 2 m apart, depending upon whether it is a pure or mixed crop.

Soaking the seed for about 12hrs prior to sowing is said to improve germination.

Application of organic measure is beneficial.

The harvested spikes are stacked in heaps till the capsule blacken and they are spread out in the sun to dry.

Method of collection of seed

The seed and roots are collected when the seeds are ripe and they have dehisced on their own.

The oil is expressed from the seeds with the two varieties.

Traditional method

Commercial extraction

Shodhana¹

First crushed the eranda seed then remove the internal part of seed and soaked with milk or boil it 2-3 times with milk. (Bh.pr.n) Seed of *Eranda* for which fomentation is done in coconut water for 3 hours and washed with water and dried under sunshine.

Reported Phytochemistry⁷

Root - Un-identified triterpene

Root & Root bark –

Potassium,

Calcium,

Sodium,

Magnesium

Iron,

Aluminium

Gallotannins

Flower

Hyperoside

rutin,ricine,

opigenin & chlorogenic acid

Seed-

Flavonoids lucenin

Whole plant-

Alkaloidsricinine, albumin, ricin

Reported pharmacology activity⁴

Anti diabetic activity : Ethanolic extract of Eranda root of plant significantly decreased the fasting blood sugar.

Anti microbial & anti fungal : Eranda with immunosuppressant drugs for the prevention of infection against oral cancer treatment patient show significant result.

Anti oxidant activity : gallic acid, rutin, gentistic acid are the major phenolic compound responsible for the antioxidant activity of the dry leaves of Eranda.

Anti tumor activity : Ricine A, lectin isolated from Eranda posses anti tumor.

Anti-inflammatory & free radical scavenging activity : Methanolic extract of Eranda root showed anti inflammatory & free radical scavenging activity.

Central analgesic activity: The crude extract of root bark of *R. communis* possesses central analgesic activity in tail flick response model to radiant heat at a dose of 250mg/kg.

Antiasthamatic activity : the ethanol extract of Eranda roots posses antiasthamatic activity.

Conclusion

Eranda (castor plant) is having traditionally and medicinally uses , oil of castor is also very useful , it has good therapeutic result in so many condition. Not only rheumatic condition it is useful in hair fall also. Different parts of castor having different types of chemical constituents. Now a days Eranda plant is known as bio digital plants.

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