



ORIGINAL RESEARCH PAPER

Ayurveda

A BRIEF REVIEW ON *RICINUS COMMUNIS* LINN.(*ERANDA*) AN AYURVEDIC HERB OSSESSING APHRODISIAC POTENTIAL.

KEY WORDS: Ayurvedic aphrodisiac herb, *Vrushya-Vajikar*, *Eranda*.

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ABSTRACT

In our Indian culture, parenthood has always been most important from the very beginning and still, nowadays it occupies a primary place in our civilization. But, at present day male infertility is unexpectedly rising & putting up a big worry for both patients as well as physicians. Male impotence can have many causes, including physiological and psychological ones. *R. communis* Linn. also known as castor plant, Castor oil plant belongs to Euphorbiaceae family is a well-known herb of the Indian Ayurvedic system of medicine as a *Vrushya* (Ephrodisiac) and *Vatahar* (for treatment vitiated *Vata*) Acharya Charak explains in *Sutrasthana* that the root of *R. communis* Linn. is *Vrushya*. The method of therapy which improves the potential of a man for getting progeny; treats all disorders of *Shukra* (semen), and nourishes the *Dhatu*, is called *Vrushya-Vajikarana*. However, many if not most cases of functional male impotency are accompanied with low sperm count and low sperm motility, *R. communis* can serve as an aphrodisiac in stimulating libido and builds semen potency as well and considered best as a potential aphrodisiac drug.

INTRODUCTION :

R. communis Linn. also known as castor plant, Castor oil plant belongs to Euphorbiaceae family. It is a well-known herb of the Indian Ayurvedic system of medicine as a *Vrushya* (Ephrodisiac) and *Vatahar* (for treatment vitiated *Vata*). It is used for various kinds of disease and many studies were carried out. *R. communis* has been used in Indian system of medicine for thousands of years for many purposes such as **Root bark** for emetic and purgative action and cures lumbago skin diseases, dyspnoea, hydrocele, flatulence, piles, cough, headache, leprosy, arthritis, renal calculus, dysuria, fever, swelling, mental diseases. **Seed** cures hepatitis etc. **Leaves** are diuretic, anti-helminthic, galactagogue and cures burns, vitiated conditions of *Vata* like rheumatoid arthritis, urodynia, and musculoskeletal pain. Leaves externally applied to boils and sores in the form of poultices. **Flowers** cures urodynia and glandular tumors. **The oil** obtained from seeds is slightly bitter, acrid, sweet, antipyretic, thermogenic and purgative. **The roots of *R. communis*** are sweet, acrid, astringent, thermogenic, carmative, purgative, anti-helminthic, emollient, diuretic, galactagogue, sudorific and expectorant. Acharya Charak explains in *Sutrasthana* that the root of *R. communis* is *Vrushya*, एरण्डमूलं वृष्यवतहरणं II (*Erandamoola Vrushya Vataharanam*) The method of therapy which improves the potential of a man for getting progeny for the continuity of his heredity; treats all types of disorders of *Shukra* (semen), and nourishes the *Dhatu* (tissue), is called *Vrushya-Vajikarana* (aphrodisiac). In our Indian culture, parenthood has always been most important from the very beginning and still, nowadays it occupies a primary place in our civilization. But, at present day male infertility is unexpectedly rising & putting up a big worry for both patients as well as physicians. Even though there are advents of so many modern techniques, such as Assisted Reproductive Technologies (ART), such as IVF (in vitro fertilization) but all these treatments are expensive, prolonged which cannot possible for every couple and there is no reassurance about the fertility after these treatments. It ultimately results that some men have to deal with the reality that nothing can be done about their infertility. Male impotence can have many causes, including physiological and psychological ones. However, many if not most cases of functional male impotency are accompanied with low sperm count and low sperm motility. Whereas *R. communis* can serve as an aphrodisiac in stimulating libido and builds semen potency as well and considered best as a potential

aphrodisiac drug.

MATERIAL AND METHODS:

Ayurvedic literature was collected from classical texts (*Samhitas*) and commentaries. Modern literature was collected from available published studies, articles and journals. All information was collected, analyzed and interpreted.

OBSERVATIONS AND RESULTS:

Taxonomical classification of *R. communis* Linn.

- Name –** *Eranda*
- Botanical name:** *Ricinus communis* Linn.
- Family:** Euphorbiaceae
- Taxonomy :**
- Genus:** Ricinus
- Species:** Communis
- Kingdom:** Plant
- Division:** Spermatophyta
- Sub-division:** Angiospermae
- Class:** Dicotyledonae
- Sub-Class:** Monochlamydae
- Series:** Unisexuals

R. communis is a green glabrous shrub, with palmately lobed leaves. Roots are Root Cylindrical, tortuous with a rough surface and longitudinal ridges. Seeds are oval ellipsoidal, dorsally convex. Odour is nil, taste oily and nauseating. The plant considered probably a native of Africa is found throughout the hotter parts of India, from sea level to about 2500 ft. altitude, cultivated in the fields and gardens and also frequently found run wild near habitations by roadsides and on wasteland. It grows on any type of soil and tolerates a wide range of climatic conditions. There are 2 types of *R. communis*, red (*Rakta Eranda*) and white (*Shweta Eranda*)

Phytochemistry of *R. communis* Linn.:

The seed contains fixed oil, glycogen, fibers, amylase, invertase, and ricin. The leaf contains sistosterol, octacosand, ricimine, gallic acid. Root contains geminicol ester. The leaves contain isoqueetin 2, 5-dihydroxy benzoic acid and epicatechin. They also contain rutin, hyperoside, quetin, chlorogenic acid, neochlorogenic acid, and gallic acid. The seed contains 5.15.6% moisture, 12.016.0% protein, 45.050.6% oil, and 2.02.2% ash. Seeds are high in phosphorus, 90% in the phytic form. The bean coat yielded

lupeol and 30-norlupan-3-ol-20-one. Roots, stems, and leaves contain several amino acids. Flowers gave apigenin, chlorogenin, rutin, coumarin, and hyperoside. Castor oil is constituted by several fatty acids. The castor oil consists principally of ricinoleic acid with only small amounts of dihydroxystearic, linoleic, oleic, and stearic acids. The unsaponifiable matter contains sitosterol



The root of R. communis



Flowering



Communis



Seeds of R. communis

field photo of plant of R. Communis

Medicinal properties and action of *R. communis* are depicted in table no. 1,2,3,5, and 6

Classification in Ayurvedic literature:

Table 1: Classification of *R. communis* in Ayurvedic classical texts.

Classical text	Gana/Varga/ Mahakashay
Charaka Samhita	Marutaghna
	Svedopaga
	Angamarda Prashamana
	Sneha Varga
	Madhura Skandha
Sushruta Samhita	Samshamana
	Vidarigandhadi
	Vatasamshamana
Ashtanga Hrudaya	Madhyama Panchamula
	Vidaryadi Gana
	Vataharadravya
	Vitaradi Varga

Attributes of *R. communis* Linn.

Table 2: Attributes of *R. communis* explain in classical texts.

Rasapanchaka		References								
		C.S.	S.S.	A.H	D.N.	MN	K.N.	B.N	R.N.	Sha.N
Rasa	Madhura	+	-	+	+	+	+	+	-	+
	Katu	+	+	-	+	-	-	-	+	-
	Tikta	+	-	-	+	-	-	+	-	-
	Kashay	-	+	-	-	-	-	-	-	-
Guna	Guru	+	-	+	+	+	+	+	-	+
	Snigdha	-	-	-	-	-	-	-	-	-
	Tikshna	-	+	+	-	-	-	-	-	-
	Sukshma	-	+	-	-	-	-	-	-	-
Virya	Ushna		+	+	+	+	+	+	+	+
Vipaka	Madhura	+	+	-	-	-	-	-	-	-
Karma on Dosha	Vatahara	+	+	+	+	+	+	+	+	-
	Kaphahara	-	+	-	-	-	-	+	+	-
	Pittakar	-	-	+	+	-	-	+	-	-

Action of *R. communis* Linn. according to different Ayurvedic texts.

Table 3: Action of *R. communis* according to different Ayurvedic texts.

Karma	C.S.	S.S.	A.S.	B.N.	R.N.	Sho.N	D.N.
Bhedana	-	-	-	+	+	-	-
Deepana	-	+	-	-	-	-	-
Rechana	-	-	-	-	-	-	+
Sara	-	-	+	-	-	-	-
Sodhana	-	+	-	-	-	+	-
Vayasthapana	-	+	-	-	-	-	-
Vatahara	+	-	-	-	-	-	-
Vrushya	+	+	+	+	+	+	+

Aphrodisiac action of *R. communis* Linn. stated in classical texts

Table 4: Aphrodisiac action of *R. communis* in classical texts

Samhita	Yoga	Part used	Indication
Charak Samhita	Eranda Moola ¹⁸	Eranda Moola	Vrushya
	Amrutadya Tail ¹⁹	Eranda Moola	Kshinshukra
	Erandamooladi Yapan Basti ²⁰	Eranda Moola	Klaibya
	Erandmuladi Niruha Basti ²¹	Eranda Moola	Veerya Vruddhi
	Brahmarasayana ²²	Eranda Moola	Rasayana
	Erandatail ²³	Eranda Tail	Shukra Roga
	Jivaneeya Ghruta ²⁴	Eranda	Vrushya
	Erandamooladi Yapanbasti ²⁵	Eranda Moola	Shukravardhaka, Vrushya
Sushruta Samhita	Madhutailik Basti ²⁶	Eranda Moola	Vrushya
	Doshahar Basti ²⁷	Eranda Moola	Vrushya

	Panchmoolik Madhutailik Basti ²⁸	Eranda Moola	Vrushya
	Erandasnehadi yoga ²⁹	Eranda Tail	Kshina
	Eranda tail ³⁰	Eranda Tail	Vrushya
Madanpal Nighantu	Eranda ³¹	Eranda	Vrushya
Kaiyaadev nighantu	Etandatail ³²	Eranda Tail	Shukrajanan
Astanga Samgraha	Erandamoola ³³	Eranda Moola	Vrushya
Dhanvantari Nighantu	Eranda ³⁴	Eranda	Vrushya
Shaligram Nighantu	Eranda ³⁵	Eranda	Rasayana
Nighantu Ratnakar	Eranda	Eranda	Vrushya

Actions of *R. communis* as per the modern research articles

Table 5: Actions of *R. communis* according to modern research.

Antiasthmatic activity	The ethanolic root extract of <i>R. communis</i> is effective in treatment of asthma because of its antiallergic and mast cell stabilizing potential effect. ³⁶
Antioxidant activity	Extract of leaves showed strong DPPH radical-scavenging activity. The stem and leaf extracts also shows antioxidant activity due to the existence of flavonoids in their extracts ³⁷
Antimicrobial activity	Alcohol and water (H ₂ O) extract of leaves shows effect against gram positive and gram negative bacterial strains and <i>Aspergillus flavus</i> and <i>A. fumigatus</i> fungal strains ^{38, 39, 40}
Hepatoprotective activity:	Ethanolic extract of leaves showed hepatoprotective activity due to their inhibitory activities of an increase in the activities of serum transaminases and the level of liver lipid per oxidation, protein, glycogen and the activities of acid and alkaline phosphatase in liver induced by carbon tetrachloride (CCL ₄). ⁴¹
Antihistaminic Activity	Anti histaminic activity was seen in the Ethanol extract of root in mice. ⁴²
Antiulcer activity	Seed shows that the antiulcer activity of <i>R. communis</i> is due to the cytoprotective action of the drug or strengthening of gastric mucosa and thus enhancing the mucosal defence. ⁴³
Wound healing activity	Oil of <i>Ricinus communis</i> possess wound healing activity which produces antioxidant activity and inhibit lipid per oxidation by increasing the strength of collagen fibers, preventing the cell damage and promoting the DNA synthesis. The study of wound healing activity of castor oil was in terms of scar area, % closure in excision wound model. The study resulted that the Castor oil showed wound healing activity by reducing the scar area and also the epithelization time in excision wound model. The comparison study of two different concentrations (5%w/w and 10%w/w) of castor oil was resulted that the 10 % w/w Castor oil ointment possesses better wound-healing property. ⁴⁴
Anti-inflammatory activity	Methanolic leaves extract possess protective effect in prevention of cellular events during edema formation ⁴⁵
Antifertility activity	The seed extract was found to possess anti-implantation and abortifacient effects. It was also observed that the seed extract prolonged the oestrus cycle of guinea pigs ⁴⁶

Systemic action of *R. communis*

Table 6: Systemic action: Internal use of *R. communis*

Respiratory system	Being <i>Ushna</i> and <i>Tikshna</i> it acts as <i>Kaphaghna</i>
Digestive system	Being <i>Ushna</i> and <i>Tikshna</i> it acts as good digestive.
Reproductive system	Being <i>Madhur</i> and <i>Snigdha</i> acts as <i>Vrushya</i> , <i>Stanyajanan</i> and Being <i>Tikshna</i> it causes <i>Shukra Shodhan</i> and <i>Garbhashay Shodhan</i> .
Integumentary system (skin)	Being <i>Ushna</i> , it acts as a <i>Swedopak</i> and <i>Kushtaghna</i> .

External use-

Due to is *Vatahar* action it reduces edema and pain. It is commonly used in *Vata* diseases like *Pakshaghat*, *Kampoavata*, *Amavata*, *Ardit*, *Gudrasi* etc.

DISCUSSION :

Ricinus communis Linn is a tall glabrous shrubby small tree mostly cultivated for its oilseeds. In folklore medicine, root decoction is used for rheumatoid arthritis, epilepsy, distention of uterus, prolapsus, etc. different *Karmas* of *R. communis* is explain in classical texts. Acharya Charak, *Sushruta*, *Vagbhat*, *Bhavprakash*, *Narhari pandit*, *Balkrishna*, *Dhanvantari* explain *Vrushya* action of *R. communis* with other actions.(table1) Acharya Charaka explains *R. communis* in *Marutaghna Svedopaga*, *Angamarda*, *Prashamana*, *Sneha Varga*, *Madhura Skandha*. Acharya explained every drug in specific *Gana* or group which represents its action or properties.

Madhurskanda Varga of Charak Samhita shows rasa oriented *Dravya*. In the classical text, it is also called *Rasaskandha*. The drugs of this *Gana* are capable of attributing to functions of *Madhura Rasa* or *Vipaka* like *Jeevaniya* (invigorating), *Preenana* (soothing), *Balya* (promotes strength), *Brimhana* (nourishing), *Rasayana* (anti-aging), *Vrishya* (aphrodisiac), *Shukrala* (promotes semen), etc.

R. communis is one of the medicinal plants of *Madhurskanda* which have multiple pharmacological applications against

various diseases and disorders. Due to the *Madhur Rasa* present in *R. communis*, it helps in nourishment and enhancement of *Rasadi Dhatus*, specifically *Mansa* and *Shukradhatu*. *Madhura Rasa* and *Madhur Vipaka* help to increase *Shukra* and its *Ushna Virya* help in *Shukra Pravartan*. So, *R. communis* has the best aphrodisiac effect. The *Tikta Rasa* present in *R. communis* helps to increase the *Dhatvagni* and in the formation of *Dhatus*. For instant aphrodisiac effect, *R. communis* should be used with *Ksheer*, *ghee*, and *Sharkara*. Due to *Shukra Janan* and *Shukra Vardhan* effect of *R. communis* it should be used in *Shukra Kshaya*.

Due to the *Madhur Rasa* and *Snigdha Guna* present in *R. communis* it helps to increase from *Rasa Dhatu* to *Shukra Dhatu*. *Tikta Rasa* does *Agni Deepan Karma*. Therefore, *Dhatu* gets nourished and enhanced. *R. communis* helps to increase *Prithvi* and *Jala Mahabhuta Pradhan Ansh* present in *Dhatu* which results in an increase of *Mansa Dhatu*. *Mansa Dhatu* helps to provide nourishment to body and helps in *Brimhan Karma*.

R. Communis contains flavonoids, antioxidants, amino acids which helps to improve the fertility. *R. communis* nourishes the Psycho neuroimmune response (called PNI) and crucial mind-body connection and has central nervous system stimulant effects such as it improves memory and has neuroleptic effects. It increases the *Shukra*, enhances virility and has aphrodisiac properties and hence considered best as a potential aphrodisiac drug.

CONCLUSION:

Now a day, people are becoming more and more dependent on herbal products rather than the chemical ones. Infertility is unexpectedly rising & putting up a big worry in society. Male infertility and reproductive dysfunctions are serious widespread health problem and half of the human infertility is considered to be male, moreover, the etiology is not obvious in 40-50% of infertile males as well. The aid for this problem is coastally and can possible for everyone. *R. communis* is abundantly available drug and can stimulate the production of testosterone, sperm and libido, hence considered the potential aphrodisiac drug in Ayurveda.

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