

## The review on therapeutic uses of Castor oil (Eranda Tailam) with special reference to Ayurvedic and Modern science.

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### Abstract:

The world is gifted with a flourishing wealth of medicinal plants. *Ricinus communis* Linn. famous as Castor belonging to family Euphorbiaceae is generally cultivated for its oil seeds. The all parts of plant viz. root, bark, leaves, flower, fruit, seeds, oil etc. possess high medicinal value and traditionally used for the treatment of various ailments of human being. It is known as Erandaa in Sanskrit which illustrates the property of drug to drive out diseases. Castor oil is pale yellowish or almost colorless oil and having a peculiar odor with sticky consistency. It is also used as lubricant and in coating fabrics, in the manufacture of printing inks etc. It has been freely used all over India since centuries mostly as a purgative. In Charaka samhita Castor oil is mentioned as the best one amongst purgatives. It is popularly used since centuries in Ayurvedic system of medicine for the management of rheumatic disorders, various skin diseases, worms and ascites. The aim of this study is to document the literature on Ayurvedic therapeutic aspect of Castor oil and highlight its importance as a medicinal agent. A scrutiny of literature revealed its notable therapeutic uses in the disorders like gastrointestinal diseases, ascites, skin diseases, Rasayana or Rejuvenation and many more conditions. This review comprehensively incorporates the salutary uses of Castor oil as per Ayurvedic as well as modern science.

### Key Words:

*Ricinus communis* Linn., Castor oil therapeutic uses, Ayurveda's therapeutic guidelines of Eranda Taila

### Key message(s):

Erandaa (*Ricinus communis* Linn.) possess high medicinal value and conventionally used for the management of various human disorders. It has been mostly as a

purgative but also prescribed for the management of rheumatic disorders, various skin diseases, worms and ascites by Ayurveda. The present study is focused on Ayurvedic therapeutic aspect of Castor oil along

with salutary uses of Castor oil as per Ayurvedic as well as modern science.

**Introduction:**

Vegetable oils are triglycerides extracted from oil seeds such as Olive, Soya, Sunflower, Palm, Castor and many others. Triglycerides are the main constituents of vegetable oils and animal fats. <sup>[1]</sup> These unprocessed or crude oils are used in food industry as an ingredient or as cooking oil. Some vegetable oils also used for industrial purposes and can be converted into biodiesels. <sup>1</sup>

Eranda plant i.e. *Ricinus communis* Linn. belonging to family Euphorbiaceae grows throughout the tropical areas of India and is very variable in habit and appearance. In tropical regions the tree reaches the height of 10-12 meters, while in temperate regions it's a slender, woody, branching bush reaches up to 1-2 meters in height. <sup>[1]</sup> The leaves are alternate, palmately lobed with seven serrate lobes. The flowers are monoecious, male flowers are shortly stalked and female ones, sessile. <sup>[1]</sup>The fruits are blunt, greenish, tricoccus capsules. The seeds of Eranda are ovoid, flattened, shining and pinkish - grey in colour. <sup>2</sup>

In Ayurveda, Castor oil is commonly used for purgation and treatment of Vata disorders. But if its wide action and benefits will be taken into consideration, it can be used wisely in various conditions and cure of several diseases. Therefore this review on Castor oil compiles various classical references of Castor oil used in various disorders and various ways (mode of administration) and kalpanas (with Kashaya (decoction), milk etc. or external application) to use Castor oil safely with a scope of development for future research. These diverse benefits of Castor oil have made it a true marvel of nature.

The references of Castor oil were compiled from Ayurvedic classical texts like Sushruta Samhita, Charaka Samhita, Ashtanga Hridaya, Bhavprakasha Nighantu and Yogratnakara.

Composition of Castor oil, Ayurvedic types Castor plant, its Rasa, Veerya, Veepaka, Guna and Doshgnata (action on Doshas) and its various references in the treatment of diseases were gathered from Ayurvedic texts as well as by surfing various websites.

**Ayurvedic information:**

Castor oil is a vegetable oil obtained from the seeds of plant Eranda. In Ayurvedic texts two types of Eranda Plants are mentioned on the basis of its colors.<sup>3</sup>

i) White – Small (subtype) – Its root and seed oil is used in medicine.

Big or Large (subtype) – Its leaves are used.

ii) Red – Seed oil is used in medicine which is sharper in action.

Eranda comes under following Gana (groups)

i) Charaka Samhita: Bhedaniya, Swedopaga, Angamarda-prashamana, Madhura skandha

ii) Sushruta Samhita: Vidarigandhadi, Adhobhaghara, Vata-sanshamana.

#### Ayurvedic Properties of Castor Oil:<sup>4</sup>

<b>Rasa</b>	Madhura, Katu
<b>Anurasa</b>	Kashaya
<b>Virya</b>	Ushna
<b>Vipaka</b>	Madhura
<b>Guna</b>	Sookshma, Teekshna, Sara, Snigdha
<b>Doshagnata</b>	Vata- Kaphahara

Eranda Taila (Castor oil) possesses Madhura rasa, Madhura Vipaka, Ushna veerya, and Gunas (properties) like Teekshna (penetrating action), Sookshma (enters into minute channels) and actions like Deepana (improves Agni), Srotovishodhana (cleanses the channels), Vrishya (aphrodisiac), Vaysthapana (withholds ageing), Yoni-Shukra vishodhana (improves dis-functioning of male and female reproductive systems), Vat-

kapha-hara (alleviates Vata and Kapha) and Adhobhaga dosha-hara i.e. it removes the doshas from below by causing purgation and is excellent for Skin, improves health, intelligence, brilliance, complexion, memory and strength.<sup>5</sup>

Amongst all the varieties of tailam, Tila tailam (Sesame oil) is praised because of its superiority, it is the most efficacious for the purpose of Bala (strength) and Snehan (oleation).<sup>6</sup> It

should be noted that Tila tailam is having special action on Mala i.e. Badhavitmutratwa (binds stools and reduces the quantity of urine)<sup>7</sup> and in Vata disorders, considering the concept of Vat chikitsa (management); 'Apanvayu Anulomanam'<sup>8</sup> (downward movement of Apana vayu) should be given the first preference and Tila taila doesn't satisfy this condition due to its Badha-vit-mutratwa action.

Secondly in the Ayurvedic classics Avapidaka sneha (medicated ghee) is described in the treatment of Mutra vega dharana (retention of urine) and it is mentioned to consume Ghrita (ghee) instead of Taila (oil) as Tila taila (Sesame oil) causes baddha mala and mutratwa (binds stools and reduces the quantity of urine).<sup>9</sup> So it can be concluded that Eranda taila (Castor oil) is superior to Tila taila (Sesame oil) by means of Srotoshodhana (cleanses the channels) Vaysthapana (withholds ageing), Rasayana (rejuvenation) Yoni- Shukra vishodhana (purifies reproductive system) and Adhobhaga-doshahara (removes the dosha from below) properties; but the drawback of Eranda taila is its possible side effects.

In high dosage it gives toxic or adverse reactions.

#### **Methods of using Eranda Taila:<sup>10</sup>**

Practically Eranda taila used in a dose of 20 to 40 ml and it should be given mixing with following combinations considering Prakriti (constitution), Bala (strength) and Vyadhi-avastha (diseased condition) of patient.

1. Eranda + Mamsa Ras (Mutton soup) - Vata vikara, Bal-Mamsa kshaya
2. Eranda + Godugdha (Cow's milk) – Pitta Prakriti, Pitta-Rakta predominance
3. Eranda + Triphala Kwatha (decoction) – Anuloman (downward movement of Apana vayu), skin diseases
4. Eranda + Dashmoola kashaya (decoction) – Vatodara, Shoola (abdominal pain), Shotha (oedema)
5. Eranda + Mudga Yusha (Green gram soup) – Swasthya purpose (for maintaining health)
6. Eranda + Gomutra (Cows Urine) – Kapha Meda Predominance (kapha and lipid disorders)
7. Eranda + Madya (Alcohol) – Habituate to Alcohol
8. Eranda + Food – Mrudu koshta, very less Bala (strength)

#### **Use of Eranda taila in the treatment of various diseases:**

1. **Diseases curable by Purgation therapy**<sup>11</sup> Udavarta Chikitsa - Eranda taila is an excellent remedy for conditions like Udavarta (condition of upward movement of vayu in koshta due to obstruction of Apana vayu and it may be due to faecal matter, Meda, Kapha, Pitta or Rakta) , Gulma (phantom tumour), Udara (Ascites), Bradhna (Inguinal swelling), Arsha (Piles), Plihavridhi (Splenic enlargement), Yoni-Shukra roga (diseases of female and male reproductive system), Grudhrasi (Sciatica), Pakshwadha (Hemiplegia) and other Vata vitiated diseases which are curable by Purgation therapy. Because of its Vata alleviating purgative nature, it cures Vatika diseases associated with vitiated Meda, kapha, Pitta and Rakta when consumed with other appropriate drugs.
2. **Purishavrut Vayu** (Vayu occluded by faeces)<sup>12</sup> – Eranda taila should be used as described in Udavarta Chikitsa.
3. **Shotha** (Oedema)<sup>13</sup> - In Vataja Shotha, Eranda taila is advised to consume for 15 days to 30 days
4. **Amavata** (Yogaratanakara) Rheumatoid Arthritis – For Amavata Eranda tailam is said to be excellent medicine to subside both Ama as well as Vata.
5. **Udara** (Ascites)<sup>14</sup> – In Udara chikitsa Eranda taila mixed with Milk or Gomutra should be consumed daily for one or two months. During this period water consumption is totally restricted.
6. **Shleepada** (Filriasis)<sup>15</sup> – In Vataja Shleepada Raktamokshana (leech application) should be carried over Gulpha sandhi (ankle joint) with proper Snehana and Swedana. After regaining his strength, Niruha Basti (medicated enema) is the second therapy to be done. And for further Sroto-shodhana, Eranda taila mixed with Gomutra should be consumed daily for a period of one month.
7. **Vatarakta Chikitsa** (Gout)<sup>16</sup> – Eranda taila mixed with milk is advisable to take for a period of one month in Vatarakta.
8. **Grahani Chikitsa** (Colitis)<sup>17</sup> – The physician should use Deepaniya gansiddha ghrutam (ghee medicated with group of plants having Deepaniya (Agni stimulating action) followed by Niruha basti in Vataja Grahani without Ama condition which results in elimination of Vayu and loosening of dosha. After this therapy, to eliminate

remaining dosha by purgation, Eranda taila or Trivrut ghruta can be used.

9. **Vata-vyadhi Chikitsa** (Treatment of Vata diseases)<sup>18</sup> - In Vata-vyadhi general treatment include repeatedly Snehana (oleation) and Swedana (fomentation) of complete body and is the first line of treatment due to which the Koshta will become soft, and the diseases of Vayu will not get the opportunity to get lodged permanently. After above therapy if Vayu does not subside then the patient should be given elimination therapy with the help of mild drugs and unctuous ingredients. For this purpose the patient should be given medicated ghee (ghruta) or Eranda taila with milk, which will help to eradicate unwanted bowel material and produce beneficial effects.

10. **Amashoola** (In Traditional Practice) (abdominal pain due to Ama undigested food): Eranda taila with Lashoona (garlic), Hingu (asafoetida) and Saindhav (rock salt) can be used effectively to relive abdominal pain due to Ama. In above condition abhyanga (massage) with Eranda taila over abdomen and Nabhi (around umbilicus) is also helpful to relieve pain.

11. **Yoni Vishodhana/Anartava** (Amenorrhoea)<sup>19</sup>: The problem of Anartava (Amenorrhoea) or not having regular menses is very common and it may be due to Poly cystic ovarian disease and in such circumstances, Castor oil 8-10 ml with milk once daily for 1 to 2 months should be consumed.

12. **Nidranasha** (In traditional practice) (Insomnia): Castor oil in the form of Oil Pichu (cotton soaked in oil) by Murdha taila therapy (application of oil on head) is having beneficial effect in chronic Nidranasha, which should be carried out before sleep regularly for at least 15 days.

13. **Splenomegaly** (Spleen enlargement)<sup>20</sup> : Eranda taila (Saindhavadi Taila) in the form of Anuvasana Basti (medicated enema) is useful for Spleen enlargement, Udavarta, Vatarakta, Gulma, Vata-Kapha vitiated diseases, Prameha (Diabetes) and Arsha (Piles).

**Castor oil according to modern medicine:**

**Chemical Composition of Castor plant -**

It contains stable oil 45%, slimy substance, sugar, white juice and salt 10%, seeds contain toxic elements

called Ricin which dissolves in alcohol.

3

### Chemical Composition of Castor oil<sup>10</sup>-

Acid Name	Avg. Percentage Range
Ricinolic Acid	85-95%
Oleic Acid	2-6%
Linoleic Acid	1-5%
Alpha Linoleic Acid	0.5-1%
Stearic Acid	0.5-1%
Palmitic Acid	0.5-1%
Dihydroxystearic Acid	0.3-0.5%
Others	0.2-0.5%

### Uses of Castor oil according to Modern Science<sup>21</sup>-

- 1. Gastro intestinal Remedy:** Castor oil is excellent laxative when taken orally and helps with straining during defecation and feeling of complete evacuation after a bowel movement. Its active ingredient ricinolic acid gets released in the intestine, where it helps with the process of digestion, nutrient absorption and cleansing the system.
- 2. Antimicrobial:** Castor oil also works like a natural antibacterial, antifungal and antimicrobial agent that targets underlying causes of skin disorders.
- 3. Labour stimulant:** Castor oil can be used as a labour stimulant. For centuries, pregnant women at full term have been given Castor oil orally, which causes uterine contractions.
- 4. Anti-inflammatory and Analgesic:** Castor oil is often used in arthritis

pain, joint swelling and inflammation.

It has natural anti-inflammatory properties that make it ideal massage oil that can be applied to aching joints, muscles or tissue.

- 5. Immune system and lymphatic stimulant:** Castor oil is believed to improve lymphatic drainage system, blood flow, and overall thymus gland health and other immune system functions.

### Possible side effects of Castor oil<sup>22</sup>-

Castor oil is broken down by small intestine into ricinoleic acid that acts as an irritant to intestinal lining which may cause digestive discomfort, diarrhoea and other gastrointestinal side effects. [3]

- 1. Nausea- Vomiting:** Feeling of nausea or vomiting is quite possible after consuming Castor oil as it is irritant to small intestine.

2. Diarrhoea: is the digestive disorder that could be possible after ingestion of Castor oil.
3. Allergic reactions: Allergic reactions may happen on applying Castor oil on the skin, it may be rashes or itching kind of reaction.
4. Abdominal pain: Abdominal pain or cramps are also common as an adverse reaction of Castor oil. Externally applying Castor oil for massage may cause muscle cramps.
5. Irregular heartbeats or shortness of breath: Sometimes irregular heartbeat may be observed after consuming Castor oil, shortness of breath accompanied by chest pain is a dangerous situation due to Castor oil. If someone suffers from irritable bowel ulcers, diverticulitis, haemorrhoids, colitis, prolapsed or has undergone GI surgery; in such situations one should not consume Castor oil. Thus Eranda taila should not be remembered only for purgative purpose. Eranda taila can be wisely used for treatment of various Vata-Kapha disorders. Due to its Ushna veerya, Sookshma and Sroto-vishodhaka properties it acts rapidly and gives desired benefits. Eranda taila is used for medicinal purpose in

various forms i.e. by adding in Milk, Gomutra, Triphala or Dashamoola kwatha, Mudga yusha or can be mixed with food in mrudu koshta or Alpabala conditions. The drawback of this oil is that it should be used cautiously as it may cause adverse effects in some patients.

**Conclusion:**

Eranda taila is such a miraculous drug that every physician must know about its benefits and should use it safely to combat various diseases as well as for disease prevention and Rejuvenation purpose. As Vata dosha is predominant in various disease formations and vitiation of Vata is a major causative factor of several disorders, Eranda taila by its all attributes alleviates vata, regulates the direction of motion of Apana Vayu (Anulomana) and in such a way protects the three main Marma (vital organs) of our body i.e. Shiro (head), Hridaya (heart) and Basti (Kidney/Bladder). It can be said that by appropriate use of Eranda taila in Vata Prakruti and Vata dominance conditions, we can get the benefits like benefits of consumption of Ghruta (ghee). The references regarding the therapeutic use of Castor oil according



to Ayurveda as well as modern science demonstrates that Castor oil exhibits a wide range of properties. Thus it may be concluded that Castor oil is a very significant drug which requires more exploration to utilize and get benefit of its medicinal properties.

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