


Review Article
A BRIEF REVIEW ON THERAPEUTIC EFFECTS OF – “ORNAMENTAL PLANT” ROSE
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ABSTRACT

Rosa centifolia Linn. is also known as Cabbage rose or Hundred leaved rose or *Shatapatri* or *Taruni*. It is one of the species commonly available in India. It is a complex hybrid variety developed by Dutch nurserymen in the 16th Century believed to be derived from Gallic and Damask parents. It is very well known for its perfuming and cosmetic effects. In Ayurveda it is mentioned that every plant existing in this universe is a Medicine. Rose is the best example of this saying. This Ornamental plant is having many medicinal properties which are mentioned in classics of Ayurveda and are also being critically studied through researches. Also it is used in traditional system of medicine for the management of inflammatory conditions including arthritis, cough, asthma, bronchitis, wounds, ulcers etc. Ayurveda text reveals its medicinal properties as *Hridya* (Cardio tonic), *Medhya* (Brain tonic), *Twachya* (Beneficial for skin), *Ruchya* (Enhancing taste), *Vrushya* (Aphrodisiac), *Kushthaghna* (Anti leprosy), *Grahee* (Absorbent) etc. researches are suggestive of various medicinal uses as Astringent, Relaxant, Nervine. We can also use it for treating Burns, Abrasions, minor wounds etc. This article briefly reviews medicinal properties of Rose according Ayurveda and various therapeutic aspects and formulations of Rose with a thorough review on recent research work.

KEYWORDS: Rose, Cabbage Rose, *Rosa Centifolia*, *Taruni*.

INTRODUCTION

Rose – *Rosa centifolia* Linn. a member of Rosaceae family is commonly known as cabbage rose. It is a plant which is abundantly cultivated throughout the world for its cosmetic value and medicinal purpose. It is medicinally used for blood purification, treatment of the intestinal ulcer, diarrhoea and anti-inflammatory action etc. In India about 150 original varieties and more than 2500 hybrid varieties of roses are found [1]. Cabbage rose is commonly found and also cultivated plant throughout cold and temperatic climate of India. It grows to a height of 1.5-2 m with spikes. It is cultivated for its fragrant flowers which are used commercially. The use of the rose is far and varied. It has a long history in its use in folk remedies, especially in the area of skincare. It is suitable for all skin types, but it is especially valuable for dry, sensitive or aging skins. It has a tonic and astringent effect on the capillaries just below the skin surface, which makes it useful in diminishing the redness caused by enlarged capillaries. It is also used in various formulations like rose water, Gulkand, Rose

oil, Rose petal tea. This review focuses on various medicinal aspects of rose.

Table 1: Regional Names

Region	Name
Sanskrit	<i>Taruni, Shatapatri, Karnika, Charukeshara, Laksha, Gandhadhya</i>
Hindi, Marathi, Gujarathi	Gulab
Bengal	Golap
Tamil	Irasha
Telugu	Gulabi
Arabi	Varde ahmar
Farasi	Gulesurkh
English	Rose

Table 2: Classical Categorization

Classics	Categorization
Bhavaprakash Nighantu	<i>Pushpa varga</i>
Dhanvantari Nighantu	<i>Amrutadi varga</i>
Kaiyadev Nighantu	<i>Oushadhi varga</i>
Raja Nighantu	<i>Karaviradi varga</i>

Morphology

The plant is shrubby and is 6.15cm to 3 meters in height. Branches bear thorns. Leaves have serrate margins. Flowers have many shades of colors. Fruit – oval and becomes red on ripening.

Cultivation

There are innumerable varieties of rose. Out of them 12 are of Indian origin. Others are of foreign origin. In India Kashmir, Garhwal, Santhal are well known for the best varieties of roses.

Chemical Constituents^[2]

The important chemical constituents isolated from flower petals by gas chromatography analysis were Phenyl ethanol (43%), Geranyl acetate (15.6%), Geraniol (10.5%), Linalool (6.9%), Benzyl alcohol (3.3%), Benzaldehyde (1.5%), Nerol (5-10%), Citronellyl acetate (0.3%). It also contains tannins, oligomeric proanthocyanides, saccharine matter, mineral salts, salt of mallic acid & tartaric acid, Pectin (11%), Riboflavin, sugars, purgative glycosides (multiflorin A & B).

Review of Taruni According to Various Nighantus (Ayurvedic Literature)

Ayurvedic Literature [3-8]	Synonyms	Properties	Effects on Dosha	Uses	
<i>Bhavaprakasha</i>	<i>Shatapatri</i>	<i>Rasa-Tikta, katu (Pungent)</i> <i>Guna-Hima, laghu</i>	<i>Tridoshghna</i>	<i>Hrudya, Grahi, Shukrala, Pachan</i>	
<i>Dhanvantari Nighantu</i>	<i>Taruni</i>	<i>Taruni, Ramataruni, Karnika, Arukeshara, Kumari, Gandhadhya, Dvirephagana-sammata</i>	-	<i>Kaphapittajita (Pacifies Kapha, Pitta dosha)</i>	<i>Grahi, Agnijit (Stimulates agni)</i>
	<i>Kubjaka</i>	<i>Bhadrataruni, Bruhatpushpa, Atikeshara, Mahasaha, Kantakadhya, Neelalikula-sankula</i>	<i>Rasa-Swadu (Sweet), Kashaya (Astringent) rty). Guna-Sheet (Cooling prope</i>	<i>Tridoshashamna (Pacifies all doshas)</i>	<i>Rasayana, Vrushya (Aphrodisiac), Sangrahanopara (Absorbent)</i>
<i>Ayurvediya Aushadhi nighantu</i>	<i>Kurunchi</i>	<i>Rasa-Patra – Tuvaram, Madhur, Tikta (Bitter) Guna-laghu (Light)</i>	<i>Kaphapitta rakta doshaghna (Pacifies Kapha, Pitta, Rakta dosha), vatalam (Aggravates Vata dosha)</i>	<i>Pittadaha, Jwara (Fever), Pipasa (Excessive thirst), Mukhapaka (Stomatitis), Chhardi (Vomitting), shaman Patra –Grahi</i>	
<i>Nighantu Adarsha</i>	<i>Taruni</i>	-	-	-	
<i>Kaiyadev Nighantu</i>	<i>Karnika</i>	<i>Karnika, Ramtaruni, taruni, Arukeshara, Kantakapravruta, Dheera, Neelalikul-sankula, Aparar, Bhadrataruni, Bruhatpushpa, Atikeshara,</i>	<i>Rasa-Katu, Tikta Veerya-Sheet Guna-laghu</i>	<i>Tridoshghna</i>	<i>Shukrala, Grahi, Deepana, Hrudya, Varnya (Enhances skin colour)</i>
	<i>Kubjaka</i>	<i>Kunjali, Valli, Kumara, Karnikara, Mahasaha, kantakadhya, Pankaro, Jalakubjaka-Mahakumari, Gandhadhya</i>	<i>Rasa-Swadu, Kashaya</i>	-	<i>Sara (Laxative), Vrishya</i>
<i>Nighantu ratnakar</i>	<i>Shatapatri</i>	-	-	-	
<i>Rajnighantu</i>	-	-	<i>Tridoshaghna</i>	-	

Acharya Priyavat Sharma	-	Rasa-Tikta, Kashay, Madhura Vipaka-Madhura Veerya-Sheet Guna-Laghu, Snigdha	Vatapitta shamak (Pacifies Vata, Pitta dosha)	Hrudya (Prabhav)
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Plant Profile [9]

The plants are obtained from the dried roots, flowers and leaves of plant. Some species are *R. bella* *R. blanda* *R. canina* *R. damascena* *R. foetida* *R. gallica* *R. multiflora* *R. rubrifolia* *R. setipoda* *R. pomifera* *R. omissa* *R. Carolina* *R. alpine* *R. alba*.

Name	Synonyms	Cultivation	Uses
<i>R. alba</i>	Sevati, Hindi- Gulchini, Bengal- Sweet Gulab, Eng. -lundian white rose, Punj. Gul seati	Cultivated in India	Used in fever, palpitation, Shukrajanana (Spermatogenic), laxative
<i>R. centifolia</i>	Satapatri, cabbage rose, Hindi, Marathi- Gulab, Tam.- Troja, mal.- pannir	Cultivated in many parts of India	Mildely laxative and carminative
<i>R. damascena</i>	Satapatri, Eng. Damask or Persian Rose, Beng.- Golap, Pers. - Gulisurkha, Tel.- Roja puvu, Tam.- Golappu, mal.- penniruppu	Cultivated in Bengal, Kashmir, Pujab, Patna, Ghaziapur	Mildely astringent, aperiant, carminative, refrigerant, cardiac tonic etc.
<i>R. gallica</i>	French rose	--	In uterine and pulmonary haemorrhages, gargle in throat affection
<i>R. moschata</i> / <i>R. pubscens</i> / <i>R. glandulifera</i>	Kubjak, Eng.- Musk- scented rose, Hin..- Kujai, Ben.- Kuja, Fr.- Rosier Musque, Ger.- Bisamrose	North-western India. Cultivated for production of attar	Aphrodisiac. Beneficial in bilious affections and burning of the skin. Root- Rajatarini- Eye diseases
<i>Roscoea purpurea</i>	--	--	Used in veterinary medicine
<i>Rosmarinus officinalis</i>	Hind.- Rusmari	--	Oil is carminative and stimulant.
<i>Rotala leptopetala</i>	--	Common on east coast of India	--
<i>Rotala verticularis</i>	--	Common on east coast of India	--
<i>Rosebay</i>	Siberian rose	Valley of mt. Everest	Antirheumatic, gout, neuralgia of the extremities, orchitis, hydrocele.

Traditional uses of Rose[10]

Traditionally it is observed that the Plant pacifies vitiated *Vata*, *Pitta dosha*. It is also useful in inflammation, burning sensation, conjunctivitis, cough, skin disease, cardiac disability, fever, and general weakness. Generally several rose products are used to make different cosmetic preparation like creams, lotions and other cosmetic uses. It was also used in toilet preparations, lozenges and toothpaste for its perfumery. Rose water is used in desserts, pastries and cakes. The flower buds are generally

used in cardiac troubles as a tonic and aperients. Gulkand made from the petals possesses mild laxative properties and is useful in sore throat and enlarged tonsils. The most therapeutic effects of one rose species named *R. damascena* in ancient medicine are including treatment of abdominal and chest pain, strengthening the heart^[11], treatment of menstrual bleeding and digestive problems^[12], and reduction of inflammation, especially of the neck^[13]. North American Indian tribes used a decoction of the root of

R. damascena plant as a cough remedy to ease children’s cough^[14]. This plant is also used as a gentle laxative^[15]. Rose oil heals depression, grief, nervous stress and tension. It helps in the reduction of thirst, healing old cough, special complaints of women, wound healing, and skin health. Vapor therapy of rose oil is helpful for some allergies, headaches, and migraine ^[16].

Medicinal uses of Rose^[17]

- **Roots of Rose:** The roots are useful in intestinal ulcers, rickets, hemorrhages and diarrhea and also astringent in nature.
- **Leaves of Rose:** The leaves are used in treating wounds, ophthalmia, hepatopathy and hemorrhoids.
- **Flowers of Rose:** The flowers has cooling, emollient, aromatic, cardio tonic, anti-inflammatory, expectorant, aphrodisiac, depurative, febrifuge, intellect-promoting styptic, digestive, carminative, rejuvenating and tonic properties. It is also useful in asthma, high blood pressure, bronchitis, diarrhea, dysmenorrhea, cough, fever, fluid retention, insomnia, palpitation, and stress and urinary tract infections.
- **Rose Petals:** Rose petals are rejuvenating & prove to be a tonic. Due to small and pleasant fragrance rose petals are used for making essential oils and perfumes.
- Used as antioxidant & antitussive.
- It inhibits vasoconstriction.
- It shows potent antibacterial activity.
- It inhibits the growth of leukemia cell line
- **Rosehips:** Rosehip tincture is an effective astringent for treating diarrhea or in relieving colic or as a component in cough remedies.

Home Remedies^[17]

- The paste of the rose petals or the powder of the dried petals is applied over the wounds for quicker healing.
- The paste of petals is applied over the body to control excessive sweating and to give a pleasant smell.
- The extract of the rose petals is used as drops or eye wash in burning sensation of the eyes.
- The dried paste of the petals of rose is taken internally in a dose of 5gm, along with milk treat gastritis and duodenal ulcer.
- The decoction prepared from the rose buds in a dosage of 20-30 ml in divided doses is used to treat constipation.

- A gargle made from petal infusion of rose is used for sore throats.
 - The dried hips of the wild rose are having high contents of Vit.C three times that of citrus fruits and have been used to prevent scurvy.
 - Herbal tea prepared using rose petals is consumed to treat acidity, burning sensation in the body, dryness of the oral cavity and effective against infection in the intestine.
- Dose** - Powder 1-3 gms.; Gulkanda-10 to 20gms. ; Arka- 20 to 40 gms.

Various formulations of Rose ^[17]

- **Rose oil & rose water:** Rose petals are used in making rose oil that is steam distilled by crushing. The byproduct of steam distillation is rose water, which is an excellent relaxing agent, soothes the nerves and adds flavor to a variety of dishes across the world. Rose essence is rich in flavanoids, tannins, antioxidants, and vitamins A, B3, C, D and E, making it beneficial in skin care.
- Rose essential oil is used along with carrier oils such as almond or grape fruit to treat various illnesses like hemorrhage, liver problems, nausea, fatigue, ulcers, asthma, dehydration, and bacterial infections of the stomach, colon, and urinary tract.
- **Rose petal tea:** It is efficient in cleansing the gall bladder and liver, and it helps improve bile secretion. Rose petals are dried and crushed to make tea. It also helps in alleviating mild sore throats and bronchial infections. The tea cools the body and reduces fever-related rashes.
- **Gulkand or rose petal jam:** Gulkand acts as a *Pitta* pacifier it is beneficial in treating ulcers and prevents swelling in the intestine. Reduces excessive perspiration and foul body odour. Daily intake in summer can help to prevent sunstroke, water retention problem (Gulkanda helps in increasing urine output), controls nostril-bleeding. Gulkanda is a powerful antioxidant and a very good rejuvenator. Also acts on *Rakta dhatu*, it is a good *Rakta prasadak dravya* hence can be used in various skin problems. It can also be used to treat dysmenorrhoea, menstrual pain. Can be used for calming purpose.
- **Gulab arka:** It is the distillate manufactured from the rose petals and is used to treat burning sensations of the eyes, remove bad odor of the body.
- Rose water prepared from rose leaves is an effective astringent that reduces swelling of capillaries beneath the skin. It brings relief from constipation, clears blood, and soothes the mind.

In addition, it is used on the treatment of measles and chicken pox.

- Rose water is also used to prepare some important Ayurvedic formulations as *Ratna Pishti* as *Pravala Pishti*, *Mukta pishti*, *Manikya Pishti*. *Pishti* is nothing but the powder which is prepared by giving *Bhavna* of Rose water to that particular *Ratna-bhasma*. Rose water increases the medicinal property of the formulation to great extent. *Pishti* is very valuable formulation.

Some of its uses are as -

- **Pravala pishti** – Medicine prepared from Coral with Rose water. It is used in Ayurvedic treatment of cough, cold, *Pitta* related diseases.
- **Mukta pishti** – Medicine prepared from Pearl with Rosewater and is used to treat diarrhea with bleeding, Mania, Psychosis.
- **Manikya pishti** - Medicine prepared from Ruby with Rosewater and is used to treat oligospermia, boost the immunity.

Key Actions of Rose^[17]

- Anti depressant
- Anti- spasmodic
- Aphrodisiac
- Anti-bacterial
- Anti-viral
- Antiseptic
- Anti-inflammatory
- Blood tonic
- Digestive stimulant
- Expectorant
- Increases bile production
- Menstrual regulator

Recent research work related to Rose

1. Cardiotoxic Activity^[19]

B. Mohammed Ishaq et al (2014) showed that the therapeutic efficacy of extract of *Rosa centifolia* Linn was found dose dependent and similar to that of Digoxin. Also it has Cardiotoxic activity. Researcher also states that it may be a safe alternative to Digoxin in the treatment of congestive cardiac failure. Alcoholic extract of *Rosa centifolia* Linn showed similar therapeutic index like cardiac glycosides.

2. Physiological and psychological effects on nervous system^[20]

Kenichi et.al. showed that fresh rose flowers have a sedative effect on humans and can be used as alternative source of essential rose oil.

3. Anti Arthritic activity^[21]

R. Kumar et.al. showed that *Rosa centifolia* aqueous extracts could be explored further as a

potentially safer alternative for the treatment of Rheumatoid Arthritis.

4. Anti-inflammatory and Anti-arthritic Activity^[22]

Battiwala et.al. stated in their study that aqueous extract of *Rosa Centifolia* (Linn.) flowers possess anti inflammatory and antiarthritic activity may be because of presence of flavonoids in it.

5. Analgesic Activity^[27]

Samyak et al (2015) states in this study that the entire test extracts of *Rosa Centifolia* exhibited significant analgesic activity. The methanol extract was found to be the most potent followed by ethyl acetate and benzene extracts respectively. In this preliminary study demonstrated marked analgesic activity of *R. indica* leaf in Swiss albino mice.

6. Antibacterial activity^[28]

Mishra et al (2011) found rose flower as the best source for antibacterial activity against the microorganisms. During the study they found methanolic extracts of rose petals, leaves and stem to have good antibacterial properties against the entire test microorganisms (*E.coli*, *P.aeruginosa* and *S. aureus*), while ethyl acetate extract active against *P. aeruginosa* only.

7. Antibacterial Properties of *Rosa indica* against Various Pathogens.^[29]

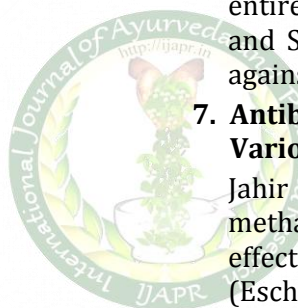
Jahir Alam Khan et al (2011) states that the methanolic extracts of Red rose petals found effective against all the pathogens used (*Escherichia coli*, *Pseudomonas aeruginosa*, *Staphylococcus aureus*). They gave a zone of inhibitions of 27 mm against *Escherichia coli*, 26mm against *Pseudomonas aeruginosa*, and 25 mm against *Staphylococcus aureus* which was far better than the zone of inhibition given by the standard antibiotic Tetracycline used throughout the study.

8. Antibacterial Properties of Different Varieties of Rose^[30]

Amit Pandey et.al. (2011) showed in this study that the antibacterial property of *Rosa indica* of red and orange color against 3 bacterial pathogens- *E. coli*, *S. aureus* and *P. aeruginosa*. The least concentration were obtained 2.314 mg/ml for ethanolic extract of orange rose leaves against *E. coli* and 0.01 mg/ml for ethanolic extract of red rose leaves, ethanolic extract of red rose petals, ethanolic extract of orange rose petals against *P. aeruginosa*.

9. Antibacterial activity study of *Rosa indica* linn. Leaves^[31]

Sahoo Anjulata Manjari et al (2011) showed that Pink rose variety is effective against both *S. aureus*



and *E. coli*. Phytochemical screening and antibacterial activity study indicated that alkaloids, flavonoids, saponins, tannins and phenols were responsible for antibacterial activity of rose.

10. Aromatherapy for Dysmenorrhoea^[32]

Sun Hee *et al.* presented in this study that aromatherapy using topically applied lavender, clary sage, and rose is effective in decreasing the severity of menstrual cramps. Aromatherapy has a significant effect on menstrual cramps or dysmenorrhoea. Menstrual cramps and dysmenorrhoea are believed to be ‘anaemic pains’ caused by reduced blood flow because of uterine hyperactivity. Menstrual cramps are thought to be relieved by increased blood circulation and antispasmodic and hormone regulatory drugs. Aromatherapy can be offered as part of the nursing care to women experiencing menstrual cramps or dysmenorrhea. It is helpful in enhancing a patient's quality of life.

11. Analgesic and Anxiety activity^[33]

Mohebitabar *et al.* showed that Rose Oil has physiological and psychological relaxation, analgesic and anti-anxiety effects on humans.

CONCLUSION

Rose has been ethno-medicinally used as a therapeutic agent for a variety of diseases, as we have illustrated in this article. More over numerous research works have proven its uses beyond the ethno-medicinal ones in experimental animals. We have mentioned its action on bodily parts according to the Ayurvedic properties (*Rasa, Veerya, Veepaka, Prabhava*) of the drug. Rose is a very well known ornamental plant which one can use as a home remedy to overcome various health issues. Practically saying the Accessibility, Feasibility, Versatility and the Cost effectiveness of this drug are the best qualities of rose which make it more & more helpful to combat stress through its *Hridya* property.

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Cite this article as:

Thakare Priya Ashokrao, Deshbhratar Kiran, Suryawanshi M.N. A Brief Review on Therapeutic Effects of - "Ornamental Plant" Rose. International Journal of Ayurveda and Pharma Research. 2017;5(12):46-52.

Source of support: Nil, Conflict of interest: None Declared

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