INTERNATIONAL JOURNAL OF RESEARCH IN PHARMACY AND CHEMISTRY

Available online at www.ijrpc.com

Review Article

ROSA CENTIFOLIA: PLANT REVIEW

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ABSTRACT

Rosa centifolia *(*family: Rosaceae), cultivated as an ornamental plant throughout India, but particularly cultivated in Grasse, the French city known as the PERFUME CAPITAL of the world. It is commonly known as **province rose, cabbage rose or Rose de mai**. It is one of the herbs mentioned in all ancient scriptures of Ayurveda. It has divers' pharmacological used including asthma, hypertension and bronchitis. It is widely cultivated for its fragrance, clear & sweet with light notes of honey. The widespread uses of *Rosa centifolia* in traditional systems of medicine have resulted in their extensive chemical analysis for their bio-active principles. This article briefly reviews the Phytochemistry and pharmacology of *Rosa centifolia*.

Keywords: *Rosa centifolia*, province rose. Rose de mai.

INTRODUCTION

Health and disease are two important areas which have engaged attracted the attention of mankind since time immemorial. The one and most important sources of medicines even since the beginning of human civilization are the plant source. In spite of tremendous developments in the field of allopathic during the 20th century, plants still remain one of the major sources of drugs in modern as well as in traditional system of medicines through the world. Over 60% of all pharmaceutical are plant based. In traditional medicine, there are many natural crude drugs that have the potential activity to treat many disease and disorders one of them is ***Rosa centifolia***; Family: Rosaceae) popularly known as province rose, cabbage rose or Rose de mai and commonly known as Gulab, Satapatri, Rosapoo, Troja . Generally the rose varieties are cultivated for home and garden beautification and its rich perfumery fragrance in many parts of the world. Traditionally the Plant pacifies vitiated VATA, PITTA, inflammation, burning sensation, conjunctivitis, cough, skin disease, cardiac disability, fever, and general weakness.

PLANT PROFILE

The plants are obtained from the dried roots, flowers and leaves of plant ***Rosa centifolia*** *belong* to the family rosaceae. There are more than 200 species of Rosa. 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. alpina*
- *R. alba*

TAXONOMY CLASSIFICATION OF *ROSA CENTIFOLIA:* –

Kingdom - Plantae
Division - Magnoliophyta
Class - Magnoliopsida
Order - Rosales
Family - Rosaceae
Genus - Rosa
Species - Centifolia

CULTIVATION

Rosa centifolia are particularly to the French city of Grasse known as the perfume capital of the world. It is widely cultivated for its fragrance. The flowers are commercially harvested for the production of rose oil, which is commonly used in perfumery. The plants cultivated are therefore recommended because of their higher flower production.

MORPHOLOGY

The plant is shrubby and grows up to 1.5-2 meters in height. Leaves are grayish green in colour, compound, imperipinnate, with 5-7 leaflets and the leaflets are ovate- lancelets. Flowers are varying in colour, usually pink, fragrant, with many petals. They are fleshy hip enclosing small and pendulous seeds. They are round shape, globular with their overlapping petals.

CHEMICAL CONSTITUENTS

The important chemical constituents isolated from flower petals by gas chromatographic 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, oloigomeric proantrocyanides, saccharine matter, mineral salts, salt of mallic acid & tartaric acid, Pectin (11%), Riboflavin, sugars, purgative glycosides (multiflorin A & B).

USEFUL PART OF *ROSA CENTIFOLIA*

Generally the Leaves, Root, Flowers part are used.

TRADITIONAL USE OF *ROSA CENTIFOLIA*

Traditionally the Plant pacifies vitiated VATA, PITTA, inflammation, burning sensation, conjunctivitis, cough, skin disease, cardiac disability, fever, and general weakness. Generally the several rose products are used to make different cosmetic preparation like creams, lotions and other cosmetic uses. It used for moisturizing purpose by mixing with vegetable glycerin. 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 and as a tonic and aperients. Gulkand made from the petals possesses mild laxative properties and is useful in sore throat and enlarged tonsils.

PHARMACOLOGICAL ASPECTS

- The roots are useful in intestinal ulcers, rickets, hemorrhages and diarrhea and also astringent in nature.
- The leaves are used in treating wounds, ophthalmia, hepatopathy and hemorrhoids.
- 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, dysmenorrheal, cough, fever, fluid retention, insomnia, palpitation, and stress and urinary tract infections.
- Tea made from petals used as- blood purifier, vertigo, and headache.
- Mild sedative, local anesthetics, laxatives, liver protectors, antidepressant, cardio-active.
- 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
- Ointment of rose-water

It is commonly known as *Cold Cream*, enjoys deserved popularity as a soothing, cooling application for chapping of the hands, face, abrasions and other superficial lesions of the skin.

BIOLOGICAL AND PHARMACOLOGICAL ACTIVITIES

Antibacterial activity

Hassan Ali *et al,* 2003 showed that ***Rosa centifolia*** water extract possesses significant antibacterial activity. It showed anti-microbial activity against bacterial strains like M. lysoditicus, S.aureus, C. pseudodiptheroid, S. dysenters, S. typhi, E. coli and S. pyogenes.

Anti tussive activity

Sankar *et al,*2011showed that the ethanol extract of *Rosa centifolia* produced significant anti-tussive activity. The essential oil obtained from ***Rosa centifolia*** is reported gastro

intestinal relaxant activity; therefore the bronchodilatory effect is responsible for its anti-tussive property and might be due to its possible tachykinin inhibitory substance mediating anti-tussive effect.

CONCLUSION

Rosa centifolia have been ethno medicinally used as a therapeutic agent for a variety of diseases, as we have illustrated in this article. More ever, numerous research works have proven its uses beyond the ethno medicinal ones in experimental animals. Citronella & farnesol which were isolated from this plant may be responsible for these actions. Researchers are of the opinion that the presence of mallic acid and citric acid are the reason behind the laxative and diuretic effect.

Leaves

Flowers

Roots

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