

Research in Pharmacy and Health Sciences

Review Article

GUL-E- SURKH (Rosa damascena Mill.) AND ITS THERAPEUTIC USES DESCRIBED IN UNANI LITERATURE

Nazamuddin Md *, Wadud Abdul, Najeeb Jahan, Tanwir Alam M¹, Asim Mohammad Khan, Mehar Adiba, Aisha Perveen

Department of Ilmul Advia (Pharmacology), National Institute of Unani Medicine (NIUM), Bangalore, Karnataka, India

¹Department of Preventive and Social Medicine, Allama Iqbal Unani Medical College (AIUMC), Muzaffarnagar, U.P., India.

ABSTRACT

Gul-e-Surkh (Rose flower) is the Persian name for the *Rosa damascena* Mill. In *Unani* system of medicine Rose flower is used for medicinal purposes. Ibn Sina considers *Gul-e- Surkh* as one of the best drug for liver. Rose flower in various doses form and/or in combination with many other drugs are indicated in various disease. It is commonly being used as general tonic for Lungs, Stomach, Intestine, Liver, Rectum, Kidney, Heart, and Uterus. Fresh flowers are purgative and dried one is astringent in properties. In this review article authors try to encompass the therapeutic indication of *Rosa damascena* Mill described in *Unani* literature.

Received: 02-10- 2017

Revised: 22-11-2017

Accepted: 01-12-2017

***Correspondence to:**

Dr. Md. Nazamuddin, BUMS

Email:

drnazamium@gmail.com

Funding: Nil

Competing Interests: None

Keywords: Rose; *Ward*; Medicinal herb; *Unani* Medicine; *Mizaj*.

INTRODUCTION

Gul-e- Surkh (Rosa damascena Mill) belongs to family Rosaceae. Under the name of *Ward*, the flower has been mentioned in Arabic and Persian literature, white wild rose, red wild rose, red garden rose etc. The red garden rose appears to be *Rosa damascena*. Roses are mentioned by the old Greek writers and among the ancients. Roses have innumerable solar myths. Roses were said to be introduced into Europe by Crusaders. Its several varieties have been discussed by *Al- Biruni*, one of the great Arabian scholar. [1, 2, 3]

Vernacular Names [2]

Arabic:	Warde Ahmar
English:	Bussora Rose, Damascus Rose
Hindi:	Gulab
Malyalam:	Penimirpush
Persian:	Gule surkh
Sanskrit:	Atimanjula
Tamil:	Irosa
Telugu:	Gulab

Scientific Classification [2]

Kingdom:	Plantae
Division:	Magnoliophyta

Class:	Magnoliopsida
Order:	Rosales
Family:	Rosaceae
Genus:	Rosa
Species:	<i>Rosa damascene</i>

Habitat and Distribution [2]

There is a general belief that it is derived from native European species but from an oriental source and it is possible that the mild stock has been correctly recognised a plant of Persia, Assyria and the East Caucasian regions. The species cultivated all over India for the production of *otto* is *Rosa damascene*. It was introduced to Europeans from Asia Minor.

Botanical Description [2]

A small shrub, 3-6 ft high, with numerous erect branches, rather densely covered with prickles of various sizes. Stem usually with numerous stout and hooked prickles, sometimes mixed with glandular bristles. Leaflets usually 5, sometimes 7, ovate oblong, serrate, more or less pubescent beneath, 2.5-6.3 cm. long; stipules scarcely dilated, sometimes pectinate; petioles prickly. Flowers

usually corymbose, double, red, pink or white, sometimes striped; Sepals deciduous.

DESCRIPTION IN UNANI LITERATURE

It is a flower of famous plant called as Damask rose. The flower has a good odour, taste is sweet followed by slightly bitterness but the bitterness is decrease after dryness. Flower is mostly red in colour but sometime may be white or pink also. Flower is of two kind; *Bustani* (cultivated) and *Jangli* (wild). Wild flower has less number of petals and least odorous than that of cultivated.

Parts used [3, 4, 5]

- Flowers,
- Flower buds, petals, stamens,
- Oil and aqua of rose

Mizaj (Temperament)[3,4,5]

Temperamentally *Gul-e-Surkh* is considered as *Motadil* (Equable) and Cold 20-Dry20 (cold and dry in second degree).

Pharmacological actions [3,4,5,6,7,8,9,10,11,12,13,14]

Fresh flowers are more laxative but dry are astringent. It is regarded as refrigerant, strengthening the vital organs, stomach and intestine, has compound action of causing mild purgation as well as astringency. Flowers help in curing burning sensation, bad odour from mouth, for improving appetite and relieving headache. It decreases the excess *Ratubat-e-Medah* (gastric secretion) and is used as stomachic. It is mainly claimed for following actions.

- *Mubarriid* (Cold)
- *Khafif Mulayyen* (Mild Laxative)
- *Muqawwie Bah* (Aphrodisiac)
- *Muqawwie Qalb* (Cardio Tonic)
- *Dafe Huma* (Antipyretic)
- *Qabiz* (Constipative)
- *Mulaiyyin* (Laxative)
- *Muqawwie Medah* (Stomachic)
- *Muqawwie jigar* (Liver Tonic)

Now we are going to mention its uses and indication more specifically i.e., system wise.

Head & Neck

Paste of fresh flower is Beneficial in headache and meningitis and in general it is nervine tonic. Its syrup resolves the quotidian fever

Eye

Effective in conjunctivitis, eye fatigue & pain.

Gastro intestinal Tract

Rose flowers are considered as best food supplement for stomach and liver. Dried flowers are very effective in bleeding dysentery. Its oil is effective in gastritis. Its Syrup increases the tone of muscles of stomach. Its syrup and *Gulkand* (a preparation made up of honey and Rose flowers) is beneficial in Cholecystitis. Sitz bath of Rose flower is effective in anal ulcer and anal pain. Its

decoction is beneficial in peptic ulcer and hemorrhoids. It resolves the hepatic obstruction.

Teeth and Gum

Strengthens the muscles of Gum

Throat and Buccal Cavity

It is helpful in mouth ulcer and stomatitis

Gargle from decoction of rose flowers is helpful in sore throat and hoarseness of voice.

Respiratory System

Paste of Rose flower and syrup of *Banafasha* (*Viola odorata*) or *Zufa* (*Hyssopus officinalis*) in linctus form is effective in Asthma. It is effective in haemoptysis.

Cardiac Vascular system

It is very effective in palpitation and syncope.

Boil & Wart

Local application of Paste made up of rose flowers is beneficial in wart and Boil. It resolves the inflammation.

Wound & Ulcer

Its paste is helpful in lesion of groin region. Dusting of powder of dried flower is done over wound and ulcer for its healing property. Dried powder of rose flower is also helpful in healing of scab of chickenpox.

Uterus

Decoction of dried rose flowers is helpful in uterine pain (due to hotness). Paste and decoction (as sitz bath) of rose bud is effective in leucorrhoea and it strengthen the vaginal muscles.

Cosmetic uses

The rose oil and rose water both are used as deodorant. It controls the excessive sweating, it is used on face and body skin as a rejuvenator. It moistens and brightens the skin. It is helpful in generalized itching. It soothes the rough skin by shedding off the dead tissues.

Toxicity

No known toxicity reported, its aroma may cause catarrhal affection. It causes cough and thirst.

Correctives[3,4,5]

Anisoon (*Pimpinella anisam*), *Habb-ul-Zam* (Egyptian nut) and Honey is used to counter its side effect if it used in excess.

Substitutes[3,4,5]

Banafsha (*Viola odorata*) and is used for corrective if *Gule-e-Surkh* unavailable.

Dose[3,4,5]

5-7 gm (approx)

Phytochemical Studies[2]

Flower contain a bitter principal, tanning matter consist of cyanine (9-10% on dry weight basis); a yellow glycoside of quercetin and a yellow crystalline dyestuff, C15 H12O6 are also present. 2-Hydroxyursolic acid β -amyrin and methyl ursolate from stamen. Average and biggest oil contents of roses from India and North Africa were estimated as 0.051 and 0.08 % respectively. Oil of roses is a mixture of a stearoptene hydrocarbon. Volatile oil containing geraniol, citronellol (rhodinol, nerol,

euginol and colourless stearoptine); the petals contains vitamin c, quercitrin, quercitannic acid, gallic acid, caritine and red colouring matter.

SCIENTIFIC STUDY ON ROSE FLOWER

- Hydroalcoholic extract and essential oil of *Rosa damascene* causes analgesic and anti inflammatory effect in experimentally induced pain and inflammation mice.[15]
- The ethanolic and aqueous extract of *Rosa damascene* causes antitussive effect in experimentally induced cough in Guinea pig.[16]
- A comparative study of hypnotic effect *Rosa damascene* extract and Diazepam in mice was performed and the result showed that the ethanol extract and fraction of *Rosa damascene* prolonged the pentobarbital induced sleeping time.[17]
- In the in-vitro study, the aqueous fraction of *Rosa damascene* causes contractile response on ileum of Guinea pigs dose dependently.[18]
- The effect of methanol extract of *Rosa damascene* Mill was studied, in comparison to the α -glucosidase inhibitor acarbose, in normal and diabetic rats. The inhibition mode of this extract was examined and the result shows that *Rosa damascena* extract has an intensive inhibitory effect on α -glucosidase. Oral administration of extract of *Rosa damascene* Mill significantly decreased blood glucose after maltose loading in normal and diabetic rats in dose dependent manner.[19]
- Effect of the *R. damascena* essential flower oil (2.5-160 $\mu\text{g/ml}$) and its two constituent geraniol (0.2-3.2 $\mu\text{g/ml}$) and citronellol (0.8-6.4 $\mu\text{g/ml}$) were studied on rat ileum contractions induced by KCl, acetylcholine (ACh) and electrical field stimulation (EFS) and compared with standard drugs atropine and loperamide. The contractile response of EFS was mediated mainly through the intramural nerve plexuses, because its response was inhibited by loperamide and partially reduced by atropine. The essential oil concentration dependently inhibited the response to KCl ($\text{IC}_{50}=67 \pm 8.4 \mu\text{g/ml}$) and EFS ($\text{IC}_{50}=47 \pm 10.6 \mu\text{g/ml}$). Geraniol ($\text{IC}_{50}=1.7 \pm 0.15 \mu\text{g/ml}$ for KCl) and citronellol ($\text{IC}_{50}=2.9 \pm 0.3 \mu\text{g/ml}$ for KCl) also had inhibitory effect of ileum contraction and both were more potent than the essential oil. It was concluded that *Rosa damascena* essential oil mainly had an inhibitory effect on ileum contractions and geraniol and citronellol had a major role in inhibitory effect of the essential.[20]
- The boiled extract of *Rosa damascene* Mill causes the laxative and prokinetic effects in rats.[21]

- The potential use of their essential oils as natural antioxidants and anti microbial leads to determine the antioxidant and antibacterial activities of fresh and spent *Rosa damascene* flower extracts. Antibacterial activity of the extract was determine by the agar diffusion method against 15 species of bacteria: *Enterobacter aerogenes*, *Aeromonas hydrophila*, *Enterococcus feacalis*, *Bacillus cereus*, *Escherichia coli*, *Klebsiella pneumonia*, *Mycobacterium smegmatis*, *Proteus vulgaris*, *Pseudomonas aeruginosa*, *Pseudomonas fluorescens*, *Salmonella enteritidis*, *Salmonella typhimurium*, *Staphylococcus aureus* and *Yersinia enterocolitica*. [22]

METHODOLOGY

The databases used to get information from journals and articles are Google, Google Scholar, Scopus, PubMed and Science Direct. For the search of ancient and recent *Unani* literature author visited Library of National Institute of Unani Medicine (NIUM), Bangalore, India

SUMMARY

This is well known fact that the various medicinal plants describe in *Unani* system medicine play a vital role against range of diseases. Plants as a whole or their extracts have significant medicinal values.[23,24] In this study we simply describe the medicinal use of *Gul-e-surkh* in *Unani* literature but only few of them have been evaluated on conventional parameter. So there is a need of hour to do more such research so as the medicinal use of *Gul-e-Surkh* may be maximise and generalised for the claimed disease and ailments.

ACKNOWLEDGEMENT:

Gracefully thanks to my guides Prof. Abdul Wadud and Dr. Najeeb Jahan for their encouragement, supervision and moral support, that eases my work to write this paper. I am heartily thankful to Dr Md Tanwir Alam for his suggestion & support in compiling and shaping this paper. The authors are also grateful to librarian and authors/editors/publishers of all those books, article and treaties from where the reference for this article has been taken.

REFERENCES

1. Nazamuddin M.; "Evaluation of hypoglycemic activity of Qurs Tabasheer in experimentally induced diabetes in animal model" [dissertation]. Dept. of Ilmul Advia (Pharmacology), NIUM, Rajiv Gandhi University of Health Sciences (RGUHS), Bangalore, Karnataka, India.; 2013.
2. Anonymous.; "The Wealth of India (Raw Materials).". New Delhi. NISCAIR. 2003(IX):65-68.

3. Ghani N.; "Khazainul Advia." Idara Kitabus Shifa. New Delhi 2011: 1133-35.
4. Hakim M.A.; "Bustanul Mufradat." New Delhi: Idara Kitabus Shifa 2002: 490-91.
5. Kabeeruddin M.; "Makhzenul Mufradat." New Delhi: Aijaz Publishing House; YNM: 350-51.
6. Ibn Sina A.A.; "Al Qanoon" (Urdu translation by Ghulam Hasnain Kantoori). New Delhi: Idara Kitabus Shifa YNM (1-5): 326-27.
7. Qasmi I.A.; "Kitabul Mufrida." 1st ed. Aligarh, International Printing Press 2001:195.
8. Ali S.S.; "Unani Advia Mufrida." 1st ed. New Delhi. Qoumi council Brai Farog Urdu Jaban 2004:241-42.
9. Maghrabi A.I.; "Kitab Al Fath Fi Al Tadawi" (Urdu Translation by Dept. of AYUSH). 1st ed. New Delhi: NCPC printers 2007:98.
10. Baghdadi I.H.; "Kitab Al-Mukhtarat fit-Tib" (Urdu translation by CCRUM). Part 3rd. New Delhi: CCRUM 2005: 122-23.
11. Azam H.K.; "Asma-ul-advia." (Translated by Syed Zilulrahman). Aligarh. Muslim University Press 2002:210.
12. Ibn Rushd A.W.; "Kitabul Kulliyat" (Urdu translation by CCRUM, literary research unit, Lucknow). New Delhi. CCRUM 1987: 301.
13. Haleem H.M.; "Mufradat Azizi." New Delhi. Published by CCRUM 2009:55
14. Ibn Baitar A.M.A.Z.; "Al-jame le Mufradatil Advia wal Aghzia" (Urdu translation by CCRUM). New Delhi: CCRUM 1999: (3):114-15.
15. Hajhashemia V, Ghannadi A, Hajiloo M.; "Analgesic and Anti-inflammatory effects of Rosa damascena Hydroalcoholic Extract and its Essential Oil in Animal Models." Iranian Journal of Pharmaceutical Research 2010 (9) 2: 163-168.
16. Shafei M.N, Rakhshandah H, Boskabady M.H.; "Antitussive Effect of Rosa damascena in Guinea pigs." Iranian Journal of Pharmaceutical Research 2003: 231-234.
17. Rakhshandah H, Shakeri M.T, Ghasemzadeh M.R.; "Comparative Hypnotic Effect of Rosa damascena Fractions and Diazepam in Mice." Iranian J Pharm Res 2007 (6)3: 193-197.
18. Dolati K, Rakhshandeh H, Shafei M.N.; "Effect of aqueous fraction of rosa damascena on ilium contractile response of guinea pig." Avicenna J Phytomedicine 3013 (3) 3: 248-53.
19. Gholamhoseiniana A, Fallaha H, Sharififarb F.; "Inhibitory effect of methanolextract of Rosa damascena Mill. Flowers on a-glucosidase activity and postprandial hyperglycemia in normal and diabetic rats." Phytomedicine 2009 (16) 935-941.
20. Sadraei H, Asghari G, Emami S.; "Inhibitory effect of Rosa damascena Mill flower essential oil, geraniol and citronellol on rat ileum contraction." Research in Pharmaceutical Sciences 2013 (8)1: 17-23.
21. Arezoomandan R, Kazerani H.R, Behnam-Rasooli M.; "The Laxative and Prokinetic Effects of Rosa damascena Mill in Rats." Iranian Journal of Basic Medical Sciences 2011 (14) 1: 9-16.
22. Ozkan G.; "Antioxidant and antibacterial activities of Rosa damascena. Food Science and Technology." Turkey; International agriculture Faculty, University of Suleyman Demirel 2004 (10) 4: 277-281.
23. Tanwir M.A, Anzar M.A, Aisha P, Shamim A.; "Therapeutic use of Gilo (Tinospora cordifolia) in unani medicine-an overview." International Journal of Universal Pharmacy and Life Sciences 2013 (3)4:187-98.
24. Dhingra S, Parle M. Herbal remedies and nutritional supplements in the treatment of depression: a review. Klinik Psikofarmakoloji Bülteni-Bulletin of Clinical Psychopharmacology. 2012;22(3):286-92.