

MAZARYUN (DAPHNE OLEOIDES SCHREB.) AN IMPORTANT UNANI DRUG: A REVIEWSayeedur Rahman^{1*}, Najeeb Jahan² and Mohd. Afsahul Klam³¹PG Research Scholar, Dept. of Ilmu Advia (Pharmacology), National Institute of Unani Medicine, Bangalore, India.²Associate Professor and Ph.D Research Scholar, Dept. of Ilmu Advia (Pharmacology), National Institute of Unani Medicine, Bangalore, India.³Department of Ilmu Advia. Regional Research Institute of Unani Medicine, Central Council for Research in Unani Medicine, Srinagar, Jammu & Kashmir, India.***Corresponding Author: Sayeedur Rahman**

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ABSTRACT

Mazaryun is a plant origin poisonous drug used in the Unani system of medicine (USM) which possesses various pharmacological actions and therapeutic values. In Unani system of Medicine, it is described as a purgative and dissolvent. Because of its amazing actions like *mushil-e-akhlat-e-salasa* (phlegmagogue, melanagogue, cholagogue), *mohallil* (dissolving), *mujaffif-e-Rutoobaat* (Siccative), *mudirr* (diuretic), *akkal* (corrosive) and *jali* (detergent) etc. it is considered as a potential drug for the management of various diseases. It has beneficial role in inflammation, wound healing, ascites, toothache and skin disorders like; leukoderma, ring worm and pityriasis etc. *Mazaryun* is native to Asia, Europe and North Africa, found as a wild and also cultivated in Kashmir, India. Leaves and roots are used medicinally in Unani system of medicine. This article discusses the tadbeer (detoxification process) and important medicinal values of *Mazaryun* as per the mention in Unani literature as well as scientific research.

KEYWORDS: *Mazaryun*; *Daphne oleoides*; Unani Medicine; Tadbeer.**1. INTRODUCTION**

The Unani medicine is an oldest system of herbal and traditional medicine which derived from plants, animals and minerals origins.^[1] The father of medicine Buqrat (Hippocrates) (460-377 BC) is the first physician who developed the basic fundamentals and gave humoral theory of Unani Medicine.^[2,3] After Buqrat some other scholars like Jalinoos (Galen) (131-210 AD), Zakarya Razi (Rhazes) (850-925 AD) and Ibn Sina (Avicenna) (980-1037 AD) who stabilized and structured the Unani medicine,^[1] and it was introduced in India by the Muslim scholars.^[4] *Mazaryun* (*Daphne oleoides* Schreb.) is a latex producing, poisonous and strong sprig drug used in Unani system of medicine.^[5,6,7] In English it is called Mezereon,^[8] and in Arabic also known as Habb-ul-Zerat.^[9] Some Unani scholars have mentioned *Mazaryun* as *khamalun* and *khamaliyun* whereas others know this herb as *khamaliyun*.^[10,11,12,13] It is important drug because mostly Unani scholars mentioned about this in their books and treatises. Several compound formulations like *habb-e-mazaryun*,^[14] *joshand-e-mazaryun*,^[15] and *roghan-e-mazaryun*.^[16] contain this drug.

1.1. Botanical description

Daphne is a genus of between 70 to 95 species of deciduous and evergreen shrubs in the family Thymelaeaceae, native to Asia, Europe and North Africa.^[17] *Daphne oleoides* Schreb. (syn: *Daphne buxifolia*; *Daphne glandulosa*; *Daphne jasmine*; *Daphne lucid*) is a small multi branched shrub found in the Western Himalayas. The root of this plant is purgative and the bark and leaves are given in cutaneous affections. Infusion of leaves is also used in gonorrhoea and applied to abscesses,^[18,19] All the parts of this plant are poisonous. Skin contact with the sap can cause dermatitis in some people. The bark contains diterpenes including mezerein, daphnetoxin (0.02%). The mezerein is anti-inflammatory and anticarcinogenic.^[8,17,18]

Scientific classification^[20]

Kingdom – Plantae; Division – Angiosperm; Clade – Tracheophytes; Clade – Eudicotus; Clade – Rosids; Order – Malyales; Family – Thymelaeaceae; Genus – *Daphne*; Species – *Oleoides*.

Vernacular names: English: Mezereon^[8] Punjabi: Kanthan^[8] Kutilal;^[14] Arabic: Habb-uz-Zerat;^[9] Unani: Khmala,^[5,11,21] Persian: Mazaryun.^[11]

Description in Unani literature

Mazaryun has two varieties, one with broader leaves and other with smaller leaves. The variety with broader leaves is thin and the other one is thick and bulky. The variety with smaller leaves is not good one whereas the variety with broader leaves is considered to be good medicinally.^[5,11,21] According to some other scholars it has three varieties.^[7] Small and large leaves do not imply that they are of same plant, rather they are found in different plants.^[21] The black *Mazaryun* is poisonous and fatal and can't be used medicinally *Mazaryun* containing white and larger leaves is considered better and the leaves are in similitude with that of olive's.^[5,6,11,13,21]

2. Habitat

The Western Himalayas and dry open slopes in Kashmir at 1,000-3,000 m.^[8,18]

3. Hisas-e-Mustamala (Parts used)

Various parts of the plant are used in Unani Medicine as well as in Ayurveda.^[22] And its leaves,^[6,7,11,23] bark,^[24] and root,^[25] have therapeutic values but leaves are mostly used in Unani System of Medicine.

4. Tadbeer (Detoxification process)

Mazaryun is a poisonous medicinal plant. And Unani physicians have advocated some detoxification methods before using *Mazaryun* for medicinal purpose. First, advised to select the best variety of *Mazaryun* i.e. having broader leaves and dipped these leaves in sour vinegar for three days (72 hrs) and change the vinegar every day, then take out the leaves from vinegar and wash them with normal water, then dry them in shed, and grind into coarse powder and fry this powder with almond oil.^[26,27,28,29,30]

If *Mazaryun* is used without detoxification it may produce severe complications, sometimes it causes vomiting and diarrhoea and sometimes both simultaneously.^[9,18] The stools are such as guts have been washed. Persons with wet temperament (Rath *Mizaj*) can tolerate this drug better, similarly aged people can tolerate better as compared to young people.^[18] In young people stomach is more active and there is accumulation of safra-e-mirra (Serous bile) that's why they can't tolerate these kinds of medicine.^[18]

Properties of Mazaryun

Mizaj (Temperament): Temperament is derived from latin word "tempero" which means "to mix"; And *Mizaj* is originated from Arabic word "mazj" which means "mixing"^[31]. *Mizaj* is one of the important and fundamental components of Unani System of Medicine. According to Unani System of Medicine everything has one or two *Kaifiyat* (quality) out of four *Kaifiyaat* (qualities) viz. *har* (hot), *barid* (cold), *yabis* (dry) and *Ratb* (wet).^[1] So intermixing of two *Kaifiyaat* which changed the previous *Kaifiyat* in the resulting of action and reaction is called *Mizaj*.^[32] The Unani drugs are classified according to their *Mizaj* (temperament): viz.,

Motadil (normal), first, second, third and fourth degree.^[33] Temperament of *Mazaryun* has been described to be *har* and *yabis* (hot & dry) in 4th degree,^[5,21,29] and according to some Scholar *har* and *yabis* (hot & dry) in 3rd degree.^[11,12,23,24]

Afal (Pharmacological actions): Every drug has one or more than pharmacological action due to presence of chemical constituents 34. *Mazaryun* also has some important actions like

- *Mushil-e-Akhlal* (Purgative)^[7,12,21,,23]
- *Muhallil-e-Auram* (anti inflammatory)^[5,7,23,29]
- *Dafa-e-Humma* (anti pyretic)^[30]
- *Mukhrij-e-Kiram-e-Shikal* (anti helminthic)^[29]
- *Mudir* (diuretic)^[23]
- *Akkal* (corrosive)^[5,13]
- *Jali* (detergent).^[6,23]
- *Mujaffif-e-Rutoobat* (Siccative) etc.^[5]

Mahall-e-Istemaal (Therapeutic Uses): Various studies has been done in relation to action and uses, which should depend on the nature and level of indication^[35]. *Mazaryun* has some beneficial uses on the basis of their functions.

- *Istesqa-e-Lahmi-o-Ziqqi* (Generalised oedema and Ascites)^[6,7,11,23]
- *Bahaq* (Pityriasis)^[7,11]
- *Bars* (Leucoderma)^[7,11,13]
- *Namash* (Naevi)^[7,13]
- *Quba* (Ring Worm)^[7,13]
- *Jarahwaqurooh* (Wood and Ulcers),
- *Hikka* (Itching)^[5,8,11,13]
- *Dard-e-Dandan* (Toothache)^[5,8,11,13]
- *Waj-ul-mafasil* (Arthritis),
- *Humma* (Fever),^[30]
- *Ekhraj-e-BalghamwaSaudawaSafra* (Elimination of phlegm, black bile and yellow bile)^[13,23]
- *Ehtibas-e-BauloTams* (Anuria & Amnorrhoea)^[23]
- *Waram-e-Tihal* (Inflammation of Spleen)^[29]

Badal (substitute): Substitution of drugs (Abdaal-e-Advia) is an important principal of USM. If the particular drug which required for the treatment of particular disease are not available, to deal with this condition ancient Unani scholar suggested therapeutic interchanging and say to use their substitute in place of the required drug,^[1] and that substitute drug similar to required drug in physical properties, temperament, chemical constituents and actions,^[36] The *Mazaryun* is not easily available and cannot be ensured everywhere in any time therefore the Unani physician have suggested two substitutes namely *Irsa* (*Iris ensata* Thunb.)^[7,23] and *Muqil-ul-Yahood* (*Commiphora mukul* Hook.)^[7]

Mazarrat (Adverse effect): Drugs can be remarkably beneficial and improve well-being but may also have toxic effects and potential to cause injury, even if used properly.^[37] According to Unani concept, the drugs belonging to the temperament of 3rd and 4th degree have

greater potency in treating diseases with minimal dosage, but at the same time they may have some harmful effects as well. In order to gain maximally safe effect and minimum harmful effect of a drug,^[33] Unani scholars have adapted certain strategies to detoxify drugs through various methods called as *Islah-e- Advia* (rectification process of the drugs) and the process is called as *Tadbeer* (detoxification/and correction procedures)^[6,26,38,39] By this way drug is corrected, partially modified and reduced toxicity by using these procedures. But if not possible to specific corrective procedures and measures on the drug so in this conditions can use corrective agents (*Musleh*) to improve the potency and efficacy and minimize the undesirable effects.^[1] *Mazaryun* has been described to be harmful to liver.^[5,6,7,11,23] and people with hot temperament^{7,23}. Therefore Vinegar (Acetic acid)^[5,7,13,21] and Almond oil (oil of *Prunus amygdalus* Batsh.)^[7,21] are used as *Musleh* (corrective agents) to reduced harmful and undesirable effect and to improve the efficacy of *Mazaryun* on liver and hot temperament people.^[5,6,7,11,23]

Miqdar-e-Khurak (Dose): The dose of *mazaryun* in powder form is 3-5 gm.^[7,21,23]

Important compound Formulation of *Mazaryun*:

Unani system of medicine treating the diseases with the help of single as well as compound formulation. These drugs are used in various dosage forms like solid, semi solid, liquid and gaseous forms¹. The compound formulation is more beneficial in the compression of single formulation due to synergism and polyherbalism.^[40] *Habb* (pills), *Joshanda* (decoction) and *Roghan* (Oil) are formulations of *Mazaryun* is mention in classical literatures.^[14,15,16] Before the preparation the *Mazaryun*, it must be detoxified as per the Unani literature, since it is a poisonous drug.

Chemical constituents

Near about 79 chemical components belonging to the *Daphne oleoides*, some important chemical components like: Daphneticin-4'-O-(x-D-glycopyranoside)19,

Gulsamanin19, Luteolin-7-O-glucoside41,
Daphwazirin30, Quercetin-3-O-glucoside41,
Daphnetin30, Daphneside30, Dapnin30, Daphnetin-8-O-glucoside 30, Daphjamilim30, Daphsaifnin30,
Dapholidin A30, Dapholidin B30, Mezerein8,
Daphnrtoxin 8, Anabsinthin19, Seemarin 30,
Gnidilatin19, Gnidilatin-20-palmitate 30, Oleodaphnone 42, Oleodaphnal 42, etc.

Scientific reports

Wound healing property

Riyaz et al. In 2015 determined the wound healing property of meshed roots of *Daphne oleoides*. Different experimental techniques have been used to check the wound healing capabilities of methanol extract.^[30]

Antimicrobial property

Uysal et al. In 2017 carried out the antimicrobial activity of essential oils of *D. oleoides*. The antimicrobial activity was evaluated by broth micro dilution method against 10 standard bacteria.^[43]

Antioxidant property

Riyaz et al. In 2015 reported that the *Daphne oleoides* is a rich source of a variety of natural products which exhibited antioxidant properties. Different chemical assay such as free radical scavenging assay, cupric reduction power, phosphomolybdate assay β -carotenelinoleic acid test system, were used to check the antioxidant ability of *Daphne oleoides*.^[30]

Riyaz et al. In 2015 also reported that the Gut modulatory effects of *Daphne oleoides* mediated through muscarinic receptors stimulation and Ca^{2+} antagonist mechanism, respectively.^[30]



Figure: Leaves of *Mazaryun* (*Daphne oleoides*).

CONCLUSION

Mazaryun is a poisonous plant but it is being used as a medicine for various diseases. It cannot be used without detoxification/purification because it has some harmful effects on liver and people with hot temperament. But its harmful effects can be eliminated by using vinegar and almond oil and some corrective procedures. Its leaves used in Unani system of medicine as a purgative, dissolving and detergent. As there are lots of actions and therapeutic uses mentioned in Unani system of medicine which is practised since years to be validated by conducting scientific research and prove the claims of Unani scholars.

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