

Impotence of Coral (Marjan; Munga) in the Unani Medicine

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Abstract

The Unani System of Medicine is traditionally attributed to Hermes (Idris A. S.). Coral (Marjan), also known as *Munga* in Unani medicine, Coral are found in tropical oceans, rich source of Iron and calcium. In Unani medicine, coral is used to treat a variety of conditions, including heart weakness, convulsions, mental disorders, weak stomach, loss of appetite, madness, epilepsy, forgetfulness, tooth decay, eye disorders, asthma, colds, coughs, bleeding gums, and tuberculosis. It is also used to treat diseases like intestinal ulcers. Coral is also considered effective in treating dementia, enhancing cognitive function and wisdom, detoxifying the body, reducing aggression and anxiety, promoting positive social behaviors, and boosting immunity. Additionally, it is used to combat the plague and related health threats. In Unani medicine, various preparations are made from coral, including *kushta*, *dawa*, *mufarikh*, *kahal* and tear drops. Several compound formulations, known as *Murakkabat*, are made from coral (*Marjan* or *Munga*) to address a range of

diseases. Notable examples include *Kushta Marjan Jawaharwala*, *Kushta Marjan Sada*, *Kushta Marjan Qalbi* and *Dawa-i-Marjan*, among others. This overview provides a detailed account of the medicinal uses of coral (*Marjan* or *Munga*) in the treatment of various ailments, as described in the literature of Unani medicine. Pakistan coasts are characterized by the presence of coral reefs. Pakistan coast is also rich in medical sciences. Additional coral species are expected to be discovered along the coastline of Pakistan. The investigation is ongoing on coral. The current article is expected to open new direction for research and development in the field of Unani medicine in Pakistan.

Keywords

(*Marjan*), Coral reefs, compounds formulation (*Kushta* and *Murakkabat*).

1. INTRODUCTION

1.1. Coral and Coral Reefs

The word coral is commonly used to indicate coral reefs species in general, found in Red Sea, Mediterranean Sea and Atlantic Ocean (Rafiquddin (1985); Bramantiet *al.*, 2011; Tsounis *et al.*, 2010; Azam Khan., 2018; Raza *et al.*, 2015). According to the Odum and Odum (1955) coral reefs are very productive ecosystem. Coral reefs are characterized by the highest biological diversity in the marine environment and they are potential sources of new medicines and pharmaceuticals and coral reefs produce compounds that have been studied for their therapeutic properties, including treatments for cancer, pain relief, and bacterial infections (Achituv and Dubinsky, 1990; Carte, 1996; Akash karthikeyan *et al.*, 2022;). Coral belong to the Anthozoa (Class) of the Cnidaria (Phylum). Coral are flourish where temperature range is 23 - 25°C. The class Anthozoa is divided into two subclasses Octocorallia and Hexacorallia Octocorallia (Deichmann 1936; Hyman 1940; Best, 1999; Raza, 2013). According to the morphology of coral, there are three growth forms; branching, massive and foliaceous (Jackson and Hughes, 1985). Coral are found in red, white and black colours, Branching and taller coral (in the form of Kushta)are used in Unani Medicine (Azam Khan., 2018). The genus *Corallium* are known as precious corals, for their hard carbonatic and colored skeleton used in jewelry and medicine. Probably the most known species of the genus and the first to be classified is the Mediterranean red coral (*Corallium rubrum* L. 1785). This species also known as “*Mediterranean red gold* “ is endemic to the Mediterranean Sea and it is probably the marine species with the highest commercial and medicine value (Best, 1999; Cairnus, 2007; Bra-manti *et al.*, 2011 ; Tsounis

et al., 2010; Raza *et al.*, 2015).

1.2. History of coral medicine

The Unani system of medicine is an ancient practice that has been in use for over 2,500 years, originating in Greece (Usaiba, 1990). Unani medicine is founded on the concepts of MedicatrixNaturae (Tabiat), Humours (Akhlat) and Temperament (Mizaj), as introduced by Buqrat (Hippocrates, 460-370 BC). The Unani system emphasizes the *AsbâbSittaarûriyya* (six essential factors) for maintaining health and preventing disease. For treatment, it utilizes three main approaches: ‘*Ilâjbi ’l-Tadbirwa-Ghidhâ*’ (Regimenal and Dietotherapy), ‘*Ilâjbi ’l-Dawâ*’ (Pharmacotherapy), and ‘*Ilâjbi ’l-Yad*’ (Surgery) (Rushid, 1987). Pharmaceutical industry has discovered valuable compounds with anti-inflammatory, anticancer, antimicrobial, AIDS inhibiting and anticoagulating properties with the soft-corals (Alcyonacea and Gorgonacea) found in reefs ecosystem (Sorokin, 1993; Carte, 1996; Birkeland, 1997a). The pharmacological activity of coral is also being explored, which is manifested in the various aspects such as anti-cardiovascular, antioxidant, anticancer, antitumor and in cerebrovascular system diseases (Wang *et al.*, 2002b).

1.3. Chemical components of coral

Coral (Marjan) is main source of calcium carbonate it contains 80 90% of calcium as CaCO_3 . Coral also contain a series of elements such as (MgO), Silica (SiO_2), Phosphorus (P_2O_3), Alumina (Al_2O_3), Ferric Oxide (as Fe_2O_3), Sulphur (S), Potassium peroxide (K_2O). The red coral have rich amount of Iron (Wen, 2007). Corals are typically found in a variety of colors, including red, white, pink, black and blue. Due to

the presence of these precious elements, Coral (Marjan) has garnered significant attention in the Unani medical tradition, leading to its use in various forms, including Kushta (calx), Sokhta (ash) of Marjan, these forms are used either individually or as components in a range of compound formulations, including *Maajeen*, *KhamiraKushta*, *Qurs* and *Habbamong* others (Wen, 2007).

1.4. Preparation of coral for eastern medicine

The coral is initially purified by boiling it in a decoction of *Terminalia myrobalans*. It is then processed for medicinal use by calcining it in a covered crucible and subsequently grinding it into a fine powder (coral ash) is prepared by soaking coral in lime juice for a period of time, then subjecting it to heat by placing it in fire for calcination, and finally grinding it into a fine powder. *Busd-i-Muharraq* prepared by the method of calcination is described by Hakim Azam Khan, as follows: The coral is first crushed into pieces and reduced to a fine powder. It is then placed between two clay crucibles, along with *Gil-i-Hikmat*, and kept in a *Tanoor* (manual oven) overnight. The resulting powder is collected the following morning (Nadkarni., 156-158pp; Kabiruddin and “Bayaze. 1935; Anonymous. 2006; Anonymous. 2011).

1.5. Uses of Coral

Marjan is an important marine-derived drug that has been utilized in Unani medicine since ancient times and remains in use today. It consists of different varieties of beneficial pharmacological properties including tonic effects on brain, stomach, heart, eyes, pregnancy and hemostyptic properties, hemoptysis, palpitations, bleeding piles, hemiplegia, heart failure and general weakness (Anus

and Zakir., 2021). Additionally, it is a key ingredient in various Unani formulations known for their therapeutic significance. Unani practitioners have broadened the applications of Marjan, successfully using it to address a range of new diseases. However, there is a lack of scientific research validating its pharmacological and medicinal properties. There is an urgent need to corroborate the Unani claims regarding its beneficial effects on cardiac and nervous systems, as well as other significant actions highlighted in Unani texts.

2. MATERIAL AND METHODS

In this review, we first conduct searches on coral on PubMed, academic website, CNCI and search 100 of literature work related to Unani medicine. This review will use of coral in Unani medicine and its application in chemical composition, clinical research and herbal medicine.

3. RESULTS AND DISCUSSION

There is a wealth of natural resources along Pakistan's coast, which presents enormous opportunities for medical research advancement. The ocean is showing a promising place to find therapeutic chemicals and use marine biodiversity for medical applications with continued study and exploration. To completely comprehend and exploit the ocean's potential to contribute to health and well-being, further research is required as much of this enormous resource is still unexplored despite the advancements made.

Coral (Marjan) is a special kind of ocean natural resource, especially in Unani medicine, an age-old medical system that prioritizes holistic treatment. Integrating the physical, emotional, and spiritual facets of patient care, unani medicine sees health as a delicate balance between the body's humors (Akhlata) and the interdependence

of all facets of existence. In this regard, coral is highly valued for its wide range of medicinal benefits, whether applied on its own or in combination with other compounds.

Numerous pharmaceutical uses of coral are supported by its abundant supply of vital minerals, particularly calcium and iron. Coral is a flexible treatment for a wide range of illnesses since these minerals play a major role in the preservation and improvement of multiple body processes. It has advantages for several bodily systems, making it a cornerstone of Unani therapeutic practices.

The capacity of coral to support muscles, especially the heart muscles, is one of its most noteworthy advantages. Calcium is essential for maintaining muscle contraction and improving the heart's strength and effectiveness. Coral's iron content also makes it a useful treatment for anemia, a disorder characterized by low hemoglobin levels. Coral increases hemoglobin synthesis, which enhances blood oxygen transfer, reviving the body and reducing anemia related problems.

Dissolving blood clots in vital organs like the heart and brain is another amazing property of coral. This anticoagulant characteristic is crucial for managing and avoiding life-threatening illnesses where blood clot formation offers serious

hazards, such as heart attacks and strokes. Because of its capacity to improve blood circulation, coral is an essential part of Unani chemical formulations that treat cardiovascular and cerebrovascular diseases.

Coral is commonly included in compound compositions used in Unani medicine to treat illnesses affecting important organs. These mixtures use coral's synergistic qualities in conjunction with other therapeutic components to treat a variety of illnesses. For example, problems like arrhythmias, hypertension, and general physical debility are frequently treated with coral-based treatments. These treatments' holistic approach guarantees not only clinical alleviation but also the body's equilibrium and harmony are restored. The use of coral in Unani medicine highlights the medicine's belief in relying on natural substances to enhance the body's inherent healing powers.

By addressing the root causes of disease and promoting overall wellness, coral-based formulations embody the principles of Unani medicine, a patient-centered approach that promotes harmony between physical, emotional and spiritual health. Thanks to new research research, the rich resources of the ocean, such as coral, have enormous promises to promote a holistic and integrative practice of health care.

3.1. Pharmacological actions, Murakkabat (Compound formulations) uses of coral in therapeutic

S No.	Pharmacological Action	Therapeutic Uses	Reference	Year
1	Muqawwida-i-Raisa	For weakness in body	Hakeem and Ghanī	1999; 2010
2	Mujaffif (Desiccant)	For Asthma and cough	Hakeem and Ghanī	1999; 2010

3	Habis-i-Dam (Hemostyptic)	Malena,, Heamorrhoids and leucorrhoea	Hakeem and Ghanī	1999; 2010
4	Qabid (retentive)	weakness of stomach, loss of appetite, flatulence	Abbas and Mustehasan; Ghanī	2016; 2010
5	Tiryayq (antidote)	Antidote	Hakeem and Ghanī	1999; 2010
6	Mufarrihwa Muqawwiyat-I Qalb (exhilarant and Cardiac tonic)	Palpitation, exhilarant and Cardiac tonic Insanity	Hakeem and Ghanī	1999; 2010

3.2. Murakkabat (Compound formulations) of Coral (Marjan)

S.No	Formulations	Therapeutic uses	Doses and Mode of administration	Reference
1	Yaquti Lulv	For Vital organs and Aphrodisiac	5-7 gm, Orally with water	Reference 26
2	Yaquti Sada	For heart, Palpitation and Melancholia	5-7 gm Orally with water	Reference 26
3	Mufarrih Yaquti	For vital organs, Weakness, Appetizer and Uterine Disease	5-10 gm , Orally with water	Reference 26
4	Yaquti Barid	Tonic for vital organs), Palpitation and Insanity	3-5 gm Orally with water	Reference 26
5	Qur? Kuhruha	Jaryan al dam (haemostatic)	5-7 gm, Oral	Reference 26
6	Dawa'al- MiskHarrSada	For heart, brain Palpitation, Insanity Melancholia, hemiplegia, cold Phlegmatic and stomach	3-5 gm, Orally with 75ml Arq 'Ga'ozabān/ 35 ml ArqBedmushk/ 20 ml Amra?-i- SharbatAnār Shirin/ water	Reference 26
7	Kushta Marjaan Sada	For cold and catarrh, bronchial asthma and loss of appetite	60-250mg, Orally with appropriate Badriqa (vehicle) such as butter	Reference 26

8	KushtaMarjaanJawaharwala	For Cardiac insufficiencies) Cerebrasthenia, hepatic insufficiency and Chronic Cold,	30-60 mg Orally with Khamīra Gā'ozabān	Reference 26
9	MufarrihSheikhurRais	For Cardiac insufficiencies, Palpitation, Hectic Fever, General debility and vital organs	3 gm , Orally	Reference 26
10	Mufarrih Motadil	For vital organs and Protector of innate heat	5-10 gm , Orally with plain water	Reference 26
11	AnushdaruLuluwi	This tonic use in general weakness, cardiac and stomach weakness, loss of appetite and digestive activities.	5-10 g/orally	Reference 5
12	Dawa-ul- MiskBaridJawaharwali	It is use in pterygium,	5g in the morning	Reference 5
13	Taryaqr Rahim	it is used in leucorrhoea	2g powder/ orally	Reference 7
14	Surma-e-Noorani	It useful in weak eyesight, pterygium, night blindness, comeal opacity, cataract,	for eyes only	Reference 7
15	Sadri	It is used in cough and asthma.	3 g with lukewarm water twice a day	Reference 7
16	Qurs-i-Sozak	It is useful in burning micturition, urethral ulcers, urinary retention, urethral ulcers and urethritis.	4 tablets/orally	Reference 7
17	QursJiryan	It is used in sexual impotence.	2 tablets twice a day/orally	Reference 7
18	Habb-e-Jawahar	This tonic for Vital organs and weakness.	One pill (each 36mg) at morning/orally	Reference 6
19	Dawa-ul-MiskHarSada	It is a cardiac tonic. It is used in palpitations and all melancholic and phlegmatic diseases	5g in the morning	Reference 5
20	Jawaharmohra	Tonic for weakness of vital organs and epilepsy	60-120mg	Reference 5
21	KhamiraAbresham Hakim Arshadwala	Used in dyspnea melancholia, weakness of vital organs and general debility.	3-6g	Reference 5

22	Kohlul Jawahar	Its use increases the texture of the eyes	for eyes only	Reference 5
23	Kushta Marjan Jawaharwala	Tonic, for coryza and stomach	Orally	Reference 5
24	Kushta Marjan Sada	For cardiac and coryza	Orally	Reference 5
25	Majun Hamal Ambari	It is very effective in uterine weakness and miscarriage	5-10g	Reference 5
26	Mufarrih Barid	Nerve tonic. for heart weakness and nerve	5-10g	Reference 5
27	Mufarrih SeikhurRais	Tonic, weakness of the heart	3gm	Reference 5
28	MufarrihYaquti	Cardiac tonic, weakness of the heart	3-5g	Reference 5
29	Mufarrih Yaquti Motadil	Tonic, useful for vital organ weakness,	5-10g	Reference 5
30	Dawa-ul-MiskBarid Jawaharwali	Cardiac tonic and mental tonic and is used in palpitations.	5g in the morning	Reference 5
31	Khamira Abresham Oodmastagiwala	It is a cardiac tonic, used for the stomach and for irritation, fear, external piles	7-10g early morning	Reference 18

4. CONCLUSION

In conclusion, coral (Marjan) serves as a powerful therapeutic agent in Unani medicine, with its applications ranging from strengthening cardiac health and treating anemia to preventing blood clots in vital organs. Its integration into compound formulations highlights its versatility and effectiveness in managing diseases affecting key systems of the body. Through its holistic approach and reliance on nature's remedies, Unani medicine continues to offer valuable insights into achieving health and balance in modern healthcare.

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