

The Review Article on Unani Medicine

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Abstract:

Marjan is also known as Munga in Unani Medicine. It is a valuable drug with multifarious medicinal uses. It is obtained from the marine source *Corallium rubrum* L. of the *Coralidae* family. It is a porous and hollow structure found in various colors e.g. white, dark red, and black. The mainly red color is used for medicinal purposes in various forms like Ash, Calx, Tooth powder, Surma, etc. Internally it acts as an astringent, styptic, antidiarrheal, diuretic, detoxificant, and tonic for vital organs. It has been used since time immemorial to treat various ailments e.g. melancholia, epilepsy, paralysis, hemoptysis, renal calculi, nerve weakness, cardiac weakness, brain disorders, etc. It is a great source of calcium and iron and some quantity of copper etc. which makes it valuable for iron and calcium deficiencies and general weakness. It is highly efficacious in cough, anemia, asthma, paralysis, anorexia etc. This review provides detail about the medicinal uses of Marjan in various systemic and non-systemic diseases in the light of classical works of literature on Unani Medicine.

Keywords: Marjan; Busd-i-Ahmar; Coral; Paralysis; Anemia; Calcium Deficiency.

Introduction

Every living organism is made up of certain chemical constituents with slight variation, therefore, in any illness of a human being three sources of the drug (Mawalid-i-Thalatha) are used either alone or in combined form for the treatment purpose. They are plant, mineral and animal substances. The substances from the animal source are used in USM since long time, which provides essential requirements of the body like hormones, micronutrients such as iron, calcium, zinc, copper etc. So various drug substances like Jund Bedastar (castorium), Regmahi (sand fish lizard), Marjan (coral), Lulu (pearl), Lajward (Lapis lazuli), Zumurrud (emerald), Khubsul Hadeed etc. are being used successfully in various forms like Ma'jun, Khamira, Kushta, Powder etc. As calcium is an essential element for the nutrition of tissues of heart and lungs, therefore various formulations containing calcium are used which are made from Marjan, Sadaf, Marwari, and many other natural sources of Unani Medicine. In USM the drugs containing calcium and iron are utilized as a whole in oxide form instead of extracting calcium form, it is considered as a safe mode of administration. Marjan is a renowned, animal-origin drug of Unani Medicine which is obtained from the colonies of the calcareous skeleton of a mollusk namely *Corallium rubrum* L.

It is dark red, porous and hollow structure comprises of calcium, iron, copper, zinc etc., therefore it is useful in general debility and weakness of heart and lung functions and also in organ dysfunction.

Progression of chronic liver diseases to hepatocellular carcinoma is not uncommon in India. Approximately 22,000 new cases of primary liver cancer are reported annually in the country. The incidence of secondary liver cancer is about twenty times higher than primary cancer. HCC is very complex and unique when compared with other cancer types. It is mostly associated with chronic liver diseases such as hepatitis or cirrhosis from any cause. They influence each other as cirrhosis is a

precursor for most HCC, and growing HCC deteriorates liver function. Moreover, HCC has resistance to a large array of toxins and most chemotherapeutics. Several clinical trials have attempted to overcome the resistance with high doses of chemotherapeutic agents. Such attempts have, however, failed to produce any meaningful survival advantage for patients with HCC. Another characteristic feature of HCC is the natural tendency of HCC cells to invade the portal vein and grow in its lumen, which can get carried away by the bloodstream resulting in distant metastasis. These adversities of HCC impose significant restrictions on treatment options. Treatment such as surgical resection, ablation, chemoembolization is useful only to selected patients. Protein kinase inhibitors like sorafenib enhance survival for only a short period. Overall very low (4%) survival rate of HCC underlines the limitations in treatment options and marks it as a cause of major health burden. At present, liver transplantation remains the only curative option for patients with cirrhosis and end-stage liver diseases.

The Unani system of medicine is one of the oldest traditional medicinal systems which has been offering treatments for chronic liver diseases and cirrhosis for centuries. A large number of single and compound drug formulations are documented to have benefits over chronic liver conditions. These formulations are mostly used for antifibrotic and liver regenerative effects. The pioneer of the Unani system of medicine the great Roman physician Galen 129– 217 (A. D.) described the liver as a counterpart of the sun which is a source of energy for other planets . The Unani system of the medicine referred to the liver as an organ responsible for the production of humor (Akhlat) which are named as sanguine (Dam), phlegm (Balgum), yellow bile (Safra) and black bile (Sauda). The liver is also identified as an organ that produces four vital powers (Quwa), namely the power of absorption (Quwat-e-jaziba), power of digestion (Quwat-e-ghaziya), power of retention (Quwat-e-masikah), and power of excretion (Quwat- e-dafiya). It is also known to be an organ responsible for the production of innate heat (hararat-e-gariziya) . An appropriate balance of these forces and humor are necessary for maintaining a healthy metabolic state of the liver. The imbalance in any of these may lead to pathological changes via alteration in the temperament of humor. The options for treatment of chronic liver diseases are based on measures for correction of altered temperaments, evacuation of morbid matter, and empowerment of liver.

It is a well-known fact that calcium is an essential element of the human body and involves in various biochemical functions of the body and tissues get nutrition from this element and is also an important component in blood to maintain pH of blood. So in the presence of these precious elements Marjan got special attention by Unani fraternity and that is why it is used in several form like Kushta (calx) and Sokhta (ash) of Bikh-i-Marjan and Shakh-i-Marjan etc. either alone or in various compound formulations e.g. Khamira, Ma'aheen, Kushta, Qurs, Habb, Kohl, Safoof etc. Coral is purified by being boiled in a decoction of the T. myrobalans and then prepared for medicinal use by being calcined in covered crucible and then reduced into powder. Pravala Bhasma (coral ash) is also prepared by soaking coral for some time in lime juice, then putting it in fire and calcining and finally reducing into a fine powder. Busd-i-Muharraaq prepared by the method of calcination is described by Hakim Azam Khan, as follows: Marjan is crushed into pieces and reduced in powder and filled in between two crucibles of clay followed Gil-i-Hikmat then it kept in the Tanoor (manual oven) for whole night and obtained the powder in the morning.

Description of drug in Unani literature:

It consists of colonies of calcareous skeleton of a mollusk *Corallium rubrum* L. it is a porous, and hollow structure of dark red in colour. It is found in Bahr-i-Ahmar (Red Sea), Bahr Al-Kahil (Mediterranean Sea), Bahr-i-Awqiyanus (Atlantic Ocean). West Indies, Panama, Japan, Taiwan and Australia. *Corallium rubrum* L. lays eggs in water which become larva and adhere on rocks in the sea. These larvae make polyp upon one by one and collectively these look like tree under sea. When the animals left their house after giving birth to their offspring, the house becomes empty, then their house comes above the sea level, and forms an island. The world's largest coral island is Coral Barrier reef situated in Australia. There are three types of Marjan mentioned in Unani classical books e.g. red, white and black. Red colour is considered best, white is lower quality and black is of worst quality. Marjan is found in two parts, one looks like branches (the upper part) and other like root which is found on the base. In a raw state the stems and branches are covered with a cortical substance which is the habitation of soft and small polypi. The branches are called Shakh-i-Marjan and root is called Beekh-i-Marjan. Both are used for medicinal purpose in Unani System of Medicine, in the form of Kushta (calx) or Sokhta (burnt). Apart from the red variety it is also found in white and black colours. White variety is softer than red and black is the hard and considered as bad (toxic). Greek legends thought that red coral having magical powers. Among the Romans, branches of coral were hung around children's necks to preserve them from danger. It has been a trade item in ancient Egypt and Rome.

Physical characteristics

Shape: Shape of small leafless bushes

Color: Intensely red or pink colored by carotenoid pigments

Taste: Tasteless

Odor: Odorless

Consistency: Hard

Fracture: It easily breaks with crackling sound.

About Unani Medicine:

Unani system of medicine has its roots in ancient Greece, in the teachings of Hippocrates (460-377 BCE). The name Unani reflects its Hellenistic origin and is derived from the Yunan, the ancient name of Greece. Unani medicine flourished to its zenith during medieval ages (500-1500 CE) in the Muslim world, mostly in the Arabian Peninsula, Persia, Egypt, Syria, ancient Mesopotamia and in and around. It is also referred to as Greco-Arabian medicine and Persian medicine in different parts of the world. Unani medicine is based on the Hippocratic concepts of Mizaj (temperament) and Akhlat (humors). Famous scholars of Unani medicine include Ibn Sina and many others. Unani Medicine recognizes the influence of surroundings and ecological conditions on the state of health of human beings. Apart from treating disease conditions, Unani Medicine lays down great emphasis on the prevention of disease and promotion of existing health through principles of six essential factors (Asbabe-Sitta Zarooriyah) of life. It also lays down great emphasis on the maintenance of a proper ecological balance and on keeping air, water and food free from all possible pollution and pathogens. An eminent Unani physician Galen (129-200 CE) postulated that certain diseases caused by pollutants tend to be carried by wind and hence, do

disseminate faster; these enter into human body through respiratory route. As per Unani classical wisdom, improving immunity with immune boosters is one of the key approaches for prevention of disease and maintenance of health. Unani Medicine in Context of Infectious Diseases and Epidemics or Pandemics Situation (Waba) The ‘germ theory of disease’ was established as late as 1683 CE with the development of the first microscope. For obvious reasons, the concept of microbes as disease-causing agents does not find a direct reference in Unani medicine. However, there is an adequate understanding that certain ajsam-i-khabitha

(literally translated as ‘bad substances’) can migrate from the diseased to healthy persons, and may cause diseases. This theory of contagion is advocated by a number of Unani scholars. According to Jalinoos, ‘a physician should always keep an eye on changes of weather and air. A treatise of ZakariyaRazi, Kitab fi al-jadariwa-al-hasbah (Book on Smallpox and Measles) describes the modes of spread of the two diseases and their differential diagnosis. In May 1970, it was regarded as “the first scientific treatise on the subject” by WHO. According to IbnSina, air and water are contaminated only after admixture of ajsam-i-khabitha, which does not happen otherwise. He further states, such contamination can also be brought about if the dead bodies of people dying due to an epidemic are not disposed off properly. It indicates that, he had knowledge of microbes being present in the body even after death, which could potentially infect others. During the 14th-century plague pandemic, Spanish scholar IbnKhatima (1364-1369 CE) mentioned in his treatise ‘Tahsilgaradal-qasidfitafsil al-marad al wafid (succeeding in clarifying pest disease) that ‘I have observed that a person who comes in close contact with a patient of plague will start suffering from the same symptoms. It is proved that ancient scholars of Unani medicine had excellent knowledge about disease transmission. A comprehensive literature search indicates that the term ‘Waba’ is used in Unani literature to describe epidemics and pandemics collectively for diseases which spread in a large geographical area. Avicenna already mention that epidemics supposed to occur when Ajsami-khabisa (contagion), find a place in air and water.

Perception of Unani Medicine:

As per Unani medicine exact term or disease for this pandemic case is not mentioned in Unani literature but it can be explained under the broad head of Humma-e-Wabaiya(Epidemic fever) andNazla-e-Wabaiya (epidemic influenza). The symptoms of NazlaWabaiya and Humma Wabaiya mimic with the symptoms of COVID-19. Humma-e-Wabaiya is adevastating type of fever which occurs due to unavoidable changes in the Air (qualitatively or quantitatively). As a result Air becomes impure and finally it gives rise to abnormal temperament of Rooh (Sprit)which subsequently results into morbidity and mortality. As fresh and pure Air is essential for health, any contamination in the Air may affect the health of any person and it depends on the intensity of contamination. Mainly those people are susceptible who have a weak immune system i.e. older and children, accumulation of waste humours and widening of skin pores. Rabban Tabari (838-870 CE)stated that people who have excess waste material in their body are usually affected with Humma wabaiya. The dominance of temperature exists in Humma-e-Wabaiya and in Nazla-e-wabaiyathe influence of catarrh symptoms present much than it. Persons with a comorbid state or a weak constitution have been described by IbnSina as being more susceptible to epidemic diseases and having a poor prognosis. Moreover, the importance of air purification, modes of transmission of infection and significance of quarantine/isolation has also been defined by Ibn Rushed in his book Kitab al-Kulliyat (Treatise on Principles of Unani Medicine).

Biological Effect and Mechanism:

Used in Ayurvedic and Unani Systems of medicine for the treatment of liver and CNS disorders. It is used as a stimulant, tonic, antispasmodic, laxative, bronchodilator, vasodilator, and tranquilizer. Investigated properties: Antifungal, hepatoprotective, anticonvulsant, neuroprotective, antiparkinson's, antidepressant, tranquilizing, antioxidant, antidiabetic, antihysterical, hypotensive, antispasmodic, anti-inflammatory, cardiogenic, antimicrobial, vasodilator, antiepileptic. Used in Unani system of medicines for pain management, digestive problems, menstrual bleeding, and strengthening of the heart. Anti-inflammatory agent in managing and treating various inflammatory conditions. Properties: Significant analgesic, anti-inflammatory, cardiogenic, anti-HIV, antibacterial, antioxidant, antitussive, hypnotic, antidiabetic, relaxant, analgesic, laxative, wound healing, skin tonic, gastrointestinal diseases, menstrual bleeding, pregnancy-related disorders, mental disorder, depression, anxiety. Beneficial for liver dysfunction and have liver tonic properties. Induced neurite outgrowth activity and inhibited A β induced atrophy and cell death. -Isolation of long -Protects A β induced atrophy and displayed strong neurite outgrowth activity.

CONCLUSION:

The present study attempted to review the formulations described in the National Formulary of Unani Medicine and Unani Pharmacopoeia of India for the treatment of liver diseases. A total of fifty-nine formulations were described. It provides nutrition for the muscles, especially cardiac muscles and also increases hemoglobin level in case of anemia. It also dissolves clotted blood from heart and brain that is why it is used as main ingredient in various Unani compound formulation which may be useful for the treatment of several diseases especially vital organs.

They were grouped into six groups based on their biological action and medicinal value. The comparison of these formulations for composition identified that they were prepared using 121 plant drugs, 18 minerals, and 6 animal-derived products. About sixteen plant drugs out of these had a profound biological effect and were used in multiple formulations for treatments of mild to severe conditions of the liver. The review points out that these sixteen plants having potential bioactive compounds, pharmacological effects and clinical application should be explored for the development of newer effective drugs in the treatment of hepatocellular carcinoma.

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