



ORIGINAL RESEARCH PAPER

Unani Medicine

PRACTICAL APPROACH TOWARDS THE ROLE OF BĀDRANJBOYA(MELISSA OFFICINALIS) IN DYSLIPIDEMIA -A REVIEW

KEY WORDS: Bādranjboya (*Melissa officinalis*); Dyslipidemia; *Simane Mufrit*; Unani literature

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| Md Sheeraz* | Research Officer Unani (S-Level 1) and Lecturer Department of Moalajat, Regional Research Institute of Unani Medicine, Srinagar, J and K. *Corresponding Author |
| MA Quamari | Reader, Department of Moalajat, National Institute of Unani Medicine, Bangalore. |
| Md Zakir | Research Officer Unani(S-Level 2), Central Research Institute of Unani Medicine, Hyderabad, Telangana |
| Abdurrasheed | Research Officer Unani(S-Level 1), Regional Research Institute of Unani Medicine, Bhadrak, Orrisa. |
| Ruqaya Qayum | PG Scholar, Department of Moalajat, Regional Research Institute of Unani Medicine, Srinagar, J and K. |
| Md Danish | PG Scholar, Department of Moalajat, Regional Research Institute of Unani Medicine, Srinagar, J and K. |
| Md Tauseef Alam | PG Scholar, Department of Moalajat, Regional Research Institute of Unani Medicine, Srinagar, J and K. |

ABSTRACT

Dyslipidemia is a metabolic disorder of lipid and lipoproteins. Abnormal plasma lipoproteins and deranged lipid metabolism is considered to be the risk factors for the atherosclerosis and it is one of the major cause of cardiovascular morbidity and mortality. It is presumed that by the year 2020 CVDs will be the leading cause of total disease burden globally. A number of lipid lowering drugs are available, but all of them will have adverse effects ranges from cutaneous flushing to dyspepsia, headache, fatigue, myopathy, rhabdomyolysis and even hepato-renal toxicity and also causes increased fasting blood sugar. So there is a need for alternative treatment. In Unani literature the description of Dyslipidemia is correlated with the concept of *Simane Mufrit* (Obesity). A number of single herbs have been described for the management of Dyslipidemia and one of commonly used herb is Bādranjboya (*Melissa officinalis*). In order to provide safe and more effective treatment for Dyslipidemia, a meticulous attempt has been made in this review study to explore the utility of the drug Bādranjboya (*Melissa officinalis*) in the management of Dyslipidemia.

Introduction

Dyslipidemia is described as any abnormality in lipids and lipoprotein in terms of quality and quantity.¹Any abnormality in lipoprotein metabolism, e.g. increased cholesterol, triglyceride, LDL cholesterol and decreased HDL cholesterol^{1,2}.Elevation in one or more of the lipoprotein fractions constitutes Hyperlipoproteinemia, some authors used the term Hyperlipidemia or Dyslipidemia instead of Hyperlipoproteinemia.¹ It is presumed that by the year 2020 CVDs will be the leading cause of total disease burden globally. Most patients with high cholesterol levels have no specific symptom or sign. The vast majority of patients with lipid abnormalities are detected by the laboratory investigations, either as part of the workup of a patient with cardiovascular disease or as part of a preventive screening strategy. Some of the features are summarized as, ¹Eruptive xanthomas which are Red-yellow papules, especially on the buttocks (Triglyceride level above 1000 mg/dL), Tendinous xanthomas which are on certain tendons achilles, patella, back of the hand (High LDL concentrations) Such xanthomas usually indicate one of the underlying genetic hyperlipidemia. Lipemia retinalis which are Cream-colored blood vessels in the fundus is seen (Extremely high triglyceride levels above 2000 mg/dL). Xanthelasma which are yellowish deposition of cholesterol underneath of skin around eyelids.¹

In Unani literature the description of Dyslipidemia is correlated with the concept of *Simane Mufrit* (Obesity).The major signs and symptoms of *Simane Mufrit* are as follows:^{3, 4, 5} Increased body weight, Difficulty of movement, Joint pain, Palpitation, Fatigue, Dyspnoea, Polydypsia, Giddiness and some time unconsciousness. Thus etiolo- symptomatology of Dyslipidemia closely resembles with etiolo-symptomatology of *Simane Mufrit*.

Ibn Sina (Avicenna - 980-1037AD) described about the abnormality of lipid in blood, produced from "*Dusumat ud-Dam*". "*Dusumat*" means "fatty, oily" and "*Dam*" means "blood".^{6,7}

Dusumat or *Duh'niyat* of the blood are the substances of lipids as described by the Unani physicians.⁸ According to them, the blood circulating in the vessels is a combination of four humours, which are formed as a result of digestion, and the digestion is continuous process taking place from the mouth to the tissue that can be occur sequentially in four stages viz; the gastric, the hepatic, the vascular and the tissue digestion. Each of the digestion is composed of specific processing of the food material that must be carried out on until it becomes suitable for use by the body.⁶Based on this concept, the blood flows within the vessels (such as plasma lipids) is the product of the second (hepatic) digestion.⁹ Thus, high plasma lipid conditions may be due to dysfunction of one or two of the previous digestion stages (hepatic and gastric digestion stages).¹⁰Abnormal gastric chylous results in abnormal hepatic chymous and abnormal hepatic chymous results in abnormal humours.¹⁰

Unani system of medicine considers human body in a holistic manner and laid down the principle of its treatment, accordingly several ailments were treated either with *Ilāj bid Dawā* (Pharmacotherapy) or *Ilāj bit Tadbeer* (Regimenal Therapy) or *Ilāj bil Yad* (Surgery). A number of single herbs have been described for the management of Dyslipidemia³ and the most commonly used herbs are Bādranjboya (*Melissa officinalis*),^{4,10,11,12,13} Muqul (*Commiphora mukul*)¹¹, Seer (*Allium sativum L*)¹⁴, Kalonji (*Nigella sativa*)¹⁵, Shibbat (*Anethum graveleons*)¹¹, Anisoon (*Pimpinalla anisum L*)¹⁰, Ustukhudoos (*Lavendula steochas*)¹¹, Kundur (*Boswellia serrata*)¹¹, Darchini (*Cinnamomum zeylanicum*)¹¹, Kanduri (*Coccinia indica*)¹⁰, Amla (*Emblca officinalis*)¹¹, Arjun (*Terminalia arjuna*)¹⁰, Filfil siyah (*Piper nigrum*)¹⁰, Haldi (*Curcuma longa L*)¹⁰, Zaitoon (*Olea europaea*)¹⁰.Compound medicines such as Khameerae Gaozuban Ambari, Majoon Seer Ulvi khan, Khameerae Abresham Sada, , Habbe Muqul, Mufarrehe Azam,¹⁶ etc.

In order to provide safe and more effective treatment for Dyslipidemia, a meticulous attempt has been made in this review

study to explore the utility of the drug Bādranjboya (*Melissa officinalis*) in the management of Dyslipidemia.

Bādranjboya (*Melissa officinalis*)

Introduction

Bādranjboya (*Melissa officinalis*) also called Mountain balm(Eng)⁴ is one of the single drugs widely described by the Unani physicians as *Mulattif* (Demulcent)¹⁰, *Mufatteh* (Deobstruent)^{10,4}, *Jāli* (Detergent)¹⁰, *Qābiz* (Astringent)^{10,4}, *Muhallile warm*(Resolvent), *Hāzim* (Digestive)¹⁰, *Muqawwie bah* (Aphrodisiac)¹⁰, *Mushile sauda* (Purgative of Melanchole)¹⁰, *Qāte saudawi bukhārāt* (Resolvent for melancholic vapours)¹⁰, Cardio tonic¹⁰ and Cardio protective¹⁰, Neuroprotective¹⁷, Anti hyperlipidemic⁵, Anti spasmodic, Carminative, Diaphoretic, Cicatrizing (used in surgical dressings for wound), Sedative- hypnotic, strengthening for memory and relief of stress induced headache. The temperament of Bādranjboya is *Garm wa Khushk* in 2nd degree. But in modern pharmacology its value is in the management of mild to moderate Alzheimers and against Migrain and Rheumatism and used for antitumor and antioxidant activities. etc¹⁷ it is also proved scientifically through clinical trials on animal and human modules, as this drug possess above described properties.

Techniques recommended for administration of *Joshānda* (Decoction) of Bādranjboya⁴:

Ibne Baitar in his book *Jameul Mufradat* recommends that the Patients will be treated with the *Joshānda* (Decoction) of Bādranjboya, where 25 grams Bādranjboya leaves will be soaked in 200 ml of water throughout night, later the next morning the leaves containing soaked water will be boiled till the water remains half of its quantity. Then the semi tepid decoction will be advised to serve in an empty stomach orally in the morning.

Chemical constituents: Essential oil rate in drug herb changes between 0.02 to 0.30%, which is quite low compared to other member of the family labiatae. That is why the production cost and price of essential oil is very high in the market. Meftahzade et al. (2010), reported that the main constituent of the essential oil are citral (geranial and neral), citronellal, geraniol, beta-pinene, alpha-pinene, beta – caryophyllene, comprising 96% of the oil ingredients.¹⁷

Discussion

Though Bādranjboya has been in practice since centuries to treat various types of metabolic disorders in Unani medicine, this review paper is a concerted attempt to bring it to medical domain for the larger benefit. In the study of Isaac *etal*,¹² essential oil of Bādranjboya has antihyperlipidemic effect in cholesterol fed rabbits. While in other studies, extract of Bādranjboya has effect on lipid profile, it decreases intracellular cholesterol due to an upregulation of LDL receptors, and also Neuroprotective properties of *Melissa officinalis* after hypoxic ischaemic injury both in vitro and vivo are mentioned by Bayat *etal*¹⁸

Possible mechanism that was proposed that Bādranjboya increases the production of LDL receptors. [Kennedy DO *etal*].¹⁹

Conclusion

Bādranjboya plays important role in the management of Dyslipidemia. , provided that the drug should be used judiciously with all the facts taken into consideration. Besides the fundamental importance of this pharmacotherapeutic methodology there is a problem of lack of uniform standardisation. It therefore apparently seems essential to standardize it and to develop certain scientific parameters for evaluation of the efficacy of this drug as it is cost effective, user friendly devoid of adverse effects. Hence scientific studies are being under taken to validate this age old drug in different Unani research institutions of India so that the benefits may be reaped by large section of society. This therapy must also be evaluated for prophylactic use so that some of the impending attacks/ bouts of disease can be averted.

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