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Review Article

Overview of Covid 19 and Unani formulation Tiryqa-e-Wabai

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ABSTRACT

Coronavirus disease 2019 (COVID-19) is arguably the biggest health crisis the world has faced in 21st century. It is an infectious disease and declared pandemic by the World Health Organization. It is a pandemic disease of modern time with unique and rapid transmission rate and affected almost all the nations without respecting any border. It's a novel infection which is caused by SARS CoV-2 with Serious Clinical manifestation i.e. Fever, Cough, Cold, Respiratory distress further may result into Death. There is no definite therapeutic drug or vaccine available for COVID-19 so far despite numerous series of experimental and clinical research. Research is in progress on therapeutic efficacy of various agents including antimalarials (Chloroquine and Hydroxychloroquine), antiviral drugs, and convalescent serum of recovered patients. Unani system of medicine is one of the traditional systems of medicine which is being explored for providing preventive, supportive and rehabilitative care to patients. Unani system of medicine has a detailed description of drugs that are utilized in many infectious diseases, including respiratory infections. Immune response is essential to eliminate virus and to preclude disease progression to severe stages. Therefore, strategies to boost immune response are certainly important. Therefore, it is important to summarize the evidence regarding the preventive measures, control options such as immunostimulator and prophylactic treatment in Unani medicine against Covid-19. This review summarizes various pharmacological actions of Unani formulation Tiryqa e wabai in unani literature and various reported pharmacological activities which can possibly provide prevention, control and reduction of complications of this deadly disease.

Keywords: Unani medicine, Covid 19, immune response, Tiryqa e Wabai

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Introduction

Severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) is a newly identified virus that differs from severe acute respiratory syndrome coronavirus (SARS-CoV) and Middle East respiratory syndrome coronavirus (MERS-CoV) but can cause similar symptoms associated with pneumonia^{1,2}. This viral disease was named "COVID-19" by the World Health Organization (WHO) and was first recognized in Wuhan, Hubei Province, in China in December 2019 and may originate from eating wildlife, an established tradition in the oldest of human cultures. The disease is thought to be mainly transmitted through droplet infection, touching and shaking hand with infected individual may also transmit the infection. Researcher has also believed that virus may be transmitted via fluids. i.e. mucus. Symptoms appear after an incubation period of two weeks. During this week virus replicates in the upper and lower respiratory tracts. Common symptoms in infected individual include fever, cough, sore throat, runny nose, breathlessness and the lesion in the lungs³⁻⁹.

Unani concept

As per Unani medicine exact term or disease is not mentioned in Unani literature but it can be explained under the heading of Humma-e-Wabaiya- Symptoms of Humma-e-Wabaiya and covid-19 looks very much similar^{10,11}. Humma-e-Wabaiya is the type of catastrophic fever which occurs due to unavoidable changes in the air (qualitatively or quantitatively). As a result air become impure and finally it give rise to abnormal temperament of Rooh 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. Mostly people with weak immune system are susceptible i.e. older and children, accumulation of waste humours and widening of skin pores. Rabban tabri stated that people who have excess waste material in their body are usually affected with Humma wabaiya^{12,13}. Unani medicine is rich with formulations useful in the prophylactic and therapeutic management of Nazla-e-Wabaiya (epidemic influenza) and other flu like symptoms.

Clinical diagnosis of Covid-19 is mainly based on epidemiology, history, clinical features and some diagnostic tests. Commonly used techniques for SARS-COVID-19 nucleic acid are RT-PCR. Apart from this we can predict it by Nabz (Pulse) and Baraaz (Stool), Usually Nabz becomes Sagheer wa Mutawatir, and the Baraz (stool) of infected person has foul smell^{14,15}.

Prevention: Unani physicians recommended for open and airy house with proper ventilation, It is advised to keep patient in cold place, sprinkle garlic and onion at the walls of the house. Elimination of fuzlaat (waste material) is necessary in order to maintain health and for this purpose venesection is advised. It is advised to take less amount of meal. Unani physicians recommended use of laxatives and diuretics which benefit during the initial phase of epidemic. Isolation of infected person from healthy person is mandatory. Patient as well as health care workers should be asked to wear a surgical mask. Unnecessary traveling should be avoided at this time^{16,17}.

In Unani classical literature several single drugs as well compound formulations have been used for several decades which possess immunostimulatory, antipyretic, expectorant as well as antiviral properties. Tiryaq e Wabai is one of the unani formulation which has immunostimulatory activity and its ingredients have expectorant and antipyretic, anti viral activities.

Tiryaq wabai is a well-documented and well-known drug in Unani system of medicine and widely used for prophylaxis during epidemics of cholera, plague and other epidemic diseases. Tiryaq wabai was used by Avicenna and Galen in healthy persons as well as in patients during epidemics^{18,19}.

Tiryaq wabai consists of three ingredients Sibr (*Aloe barbadensis*), Zaafran (*Crocus sativus*) and Mur (*Commiphora myrrh*) in the ratio of 2:1:1. Antioxidant and immune-stimulating effect of *A. barbadensis*, *C. Myrrha* and *C. Sativus* has already been established in animal models²⁰⁻²⁴. A recent study outlined immune-stimulating activity of Tiryaq wabai and supports its use in conditions where immunostimulation is required²⁵.

Description of ingredients of Tiryaq e Wabai:

ZAFRAN/ *Crocus sativus* Linn.

The drug Zafran consists of dried style and stigma of *Crocus sativus* Linn. (Fam. Iridaceae). A small, bulbous, perennial, 15 to 25cm high. It is cultivated by corms in the Kashmir valley, especially in the Pampor plateau, at about 1600 m.

Description

Macroscopic: Yellowish style, broken or intact along with trifid stigma; stigma is dark red or

reddish-brown, cornucopia shaped, with fimbriate margin, and about 25 mm long; broken style are very thin, upto about 10 mm long; odour, strongly aromatic; taste, slightly bitter.

Microscopic: Stigma composed mostly of elongated, thin-walled, parenchyma cells containing colouring matter; at the upper end numerous cylindrical papillae or trichomes up to 150 microns long present; pollen grains, a few, spherical, nearly smooth, from 40 to 120 microns in diameter, occasionally germinated and exhibiting pollen tubes. Powder - Pale reddish-brown; aromatic, shows elongated, thin-walled, parenchymatous cells, unicellular trichomes, a few spherical, smooth, pollen grains measuring 40 to 120 μ in dia. and xylem vessels with annular and spiral thickenings²⁶.

Chemical Constituents: Essential Oil, Bitter Glycoside, (Picrocrocin and Crocin)

Temperament: Hot and Dry

Dose: 25-50 mg

Important Formulations: Dawa-ul-Kurkum

Dawa-ul-Misk Motadil Sada²⁶.

SIBR/ *Aloe Barbadensis* Mill.

Drug Sibr consists of dried juice of leaves of *Aloe Barbadensis* Mill. Syn. *Aloe vera* Tourn. ex Linn; *Aloe indica* Royle of Liliaceae family. Drug yielding plant is a shrub planted in many Indian gardens and found growing throughout India.

Description

Macroscopic: Dark chocolate brown, to black, compact, irregular masses; surface dull, opaque

with slightly vitreous appearance; odour, characteristic; taste, nauseous and bitter.

Microscopic: Powder when mounted in glycerin or lactophenol and examined under the microscope show innumerable crystalline, yellowish-brown to chocolate coloured particles of

varying size and shape²⁷.

Chemical Constituents: Anthraquinone, Glycoside

Dose: 1 to 4 g.

Important Formulations: Zimad-e-Jalinoos

Majoon-e-Antaki,
Kohal-e-Bayaz,
Habb-e-Muntin Akbar,
Habb-e-Mudirr,
Habb-e-Ghafis,
Iyarji-e-Loghaziya²⁷

MURMAKI/ *Commiphora myrrha*

The drug Murmakki consists of gum-resin of *Commiphora myrrha*. A small tree found in Arabia and African coast of the Red sea. It is often cultivated in western India. The plant occurs throughout the year.

Description:

Macroscopic: The gum resin is brittle and on breaking shows a rough and waxy fracture.

Microscopic: The gum resin secreted in the phloem cells of bark is in the form of irregular masses. When pressed they show a moist and unctuous appearance and a rich brown hue. Some whitish mark of veins are seen in the translucent fractured surface.

The powdered drug is brownish in color and possess agreeable aromatic odour and a bitter, acrid but not unpleasant taste. When soaked in water a yellowish emulsion is formed²⁸

Chemical Constituents: Carbohydrates, protein, steroids, resin, gum, aluminium, iron, magnesium, calcium and zinc. Isolynalyl acetate, 3-epilupenyl acetate, lupenone, 3-epi-α-amyrin, α-amyrin, new sesquiterpene alcohol soluble extractives- commiferin.

Temperament: Hot 2° Dry 2°

Actions: Moharrik, Daf-e-Taffun, Munaffis-e-Balgham, Mudir-e-Tams

Therapeutic Uses: Sue Hazm, Qurooh, Ehtebas e Tams, Deedan e Ama

Dose: 1-2g

Important Formulations: Qurs-e-Musallas,

Dawa-ul-Kurkum,
Majoon Antaki,
Majoon-e-Talkh Deedani,
Tiryaaq-e-Afayee,

Tiryaaq-e-Arba,
Tiryaaq-e-Nazla,
Tiryaaq-e-Samania,
Zimad-e-Khanazeer,
Qurs-e-Mukhaddir²⁸

The ingredients of Tiryaaq e Wabai has various pharmacological uses and activities related to COVID 19 infection. The detailed description is as follows:

S. No.	Ingredient Name	Actions	Therapeutic Uses	Pharmacological studies
1.	<i>Aloe barbadensis</i> / Sibr	Mushil (Purgative), Mudirre Haiz (Emmenagogue), Mohallile Waram (Anti-inflammatory), Moharrike Kabid (Hepatostimulant), Munaqqie Qurooh, Mufattih-i-Sudad Saudawi, Muqawwi Meda (Stomachic- tonic), Qatile Deedan (Anthelmintic), Mujaffif (Desiccant), Qabiz (Astringent), Munawwim (Hypnotic), Mushile Sauda (Purgative of melancholic humour), Musqite Janeen (Abortifacient) ²⁹⁻³⁴	Bawaseer (Haemorrhoids), Inteshare Sha'ar (Hair fall), Kharishe Ain (Catarrhal/purulent ophthalmia), Deedane Ama (Antihelminthic), Dared-e-Ser (Headache), Ehtebase Tams (Amenorrhoea), Izame Tihal (Splenomegaly), Indemale Qurooh (Wound Healing), Iltehab Meda (Gastritis), Yarqan (Jaundice), Malankholia (Malancholia), Nawaseer (Nasal polyps), Nafsuddam (Haemoptysis), Qabz (constipation), Shiqaqe Miqad (Fissure in Ano), Waja-ul-Mafasil (Arthritis), Warne Kabid (Hepatitis), Zoaf-e-Meda (Gastric weakness) ^{28, 29,30,35,36}	Antiviral ³⁷ , Anti-inflammatory ³⁸ , Antioxidant ³⁹ , Asthma ⁴⁰ , Immunomodulatory activity ^{41,42}
2.	<i>Crocus sativa</i> / Zafran	Jali (Detergent), Daf-e-Taffun (Antiseptic), Mohallile-Waram (Anti-inflammatory), Muqawwi-e-Qalb (Cardiac Tonic) ⁴³	Amraz-e-Qalb (Cardiac Diseases), Nazla (Catarrh), Zukam (Coryza), Zof-e-Basarat (Asthenopia) ⁴³	Antitussive activity ⁴⁴ , cytotoxic effects ⁴⁵ , anti-inflammatory activity ⁴⁶
3.	<i>Commiphora myrrh</i> / Murmuki	Antifungal, antibacterial cytotoxic ⁴⁷⁻⁴⁹ , expectorant, stimulant ^{47,48} , aphrodisiac, diuretic, antispasmodic ⁴⁹ , carminative, antitussive, expectorant ^{50,51}	Amenorrhoea, menorrhagia ^{52,53} , chronic cough, asthma ^{45,47} , bronchitis, common cold ⁵⁴	Antioxidant ⁵⁵ , Antimicrobial ⁵⁶ , Anti-inflammatory activity ⁵⁷

Conclusion

Unani medicine has given ample emphasis on preservation of health and prevention of disease. Although non-drug prophylaxis is one of the principal assets of Unani medicine, the system does not undermine the utility of prophylactic drugs for accomplishing objective of *Taqaddum bil Hifz*. Stimulation of innate heat and augmentation of vital force of important organs form fundamental basis for prevention of diseases in the system. Unani system of medicine prescribes a large number of single and compound drugs for this purpose like *Chobchini* (*Smilax chinensis*), *Zafran* (*Crocus sativus*), *Tiryaaq e wabai*, etc. *Tiryaaqiyaat* are reputed compound formulations which can be used prophylactically as well as therapeutically under different circumstances. *Tiryaaqiyaat* refers to that class of drugs that strengthen the ruh (pneuma), stimulate Hararte-Gharizia (innate heat) and thus help Tabiyat (physis) to protect the body from harmful effects of morbid materials. *Tiryaaq e wabai* is one of the formulations under this category. It is composed of three ingredients, viz., *Sibr zard* (*Aloe barbadensis*), *Mur-makki* (*Commiphora myrrh*) and *Zafran* (*Crocus sativus*). The compound is documented to be effective in infectious diseases like plague, chicken pox, cholera and during any epidemic outbreak. All the three ingredients of *Tiryaaq wabai* have various pharmacological activities like

immunomodulatory, antitussive, expectorant, antiviral activity which provide a strong basis for its prophylactic use for covid 19 infection. A recent study outlined immune-stimulating activity of *Tiryaaqwabai* and supports its use in conditions where immunostimulation is required⁵⁸. Further, research on this important prophylactic Unani formulation *tiryaaq e wabai* in Covid 19 is the need of hour. Greater impetus on research in the Unani system of medicine will not only boost trade and practice of the herbal products but will also help in spreading the traditional Indian knowledge to other parts of the world.

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