**TIRYAQ-E-ARBA (A POLY HERBAL UNANI FORMULATION) IN FIGHTING AGAINST COVID 19 LIKE CONDITIONS – UNANI PERSPECTIVE**

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**ABSTRACT**

Coronavirus disease 2019 (COVID-19) is a pandemic disease of modern time with unique and rapid transmission rate and affected almost all the nations without respecting any border. 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. The coronavirus disease 2019 (COVID-19) outbreak, which originated in Wuhan, China, has now spread to 192 countries and administrative regions infecting nearly 800,000 individuals of all ages as of 31 March 2020. Though most infected individuals exhibit mild symptoms including fever, upper respiratory tract symptoms, shortness of breath, and diarrhea, or are asymptomatic altogether, severe cases of infection can lead to pneumonia, multiple organ failure, and death. Globally, at least 7900 deaths have been directly attributed to COVID-19, and this number is expected to rise with the ongoing epidemic. This is particularly crucial as the current outbreak involves a new pathogen (SARS-CoV-2), on which limited knowledge exists of its infectivity and clinical profile. Research is in progress on therapeutic efficacy of various agents including anti-malarials (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, it is important to summarize the evidence regarding the preventive measures, control options such as immune-stimulator and prophylactic treatment in Unani medicine against Covid-19. This review summarizes various pharmacological actions of Unani formulation Tiryaq-e-Arba in Unani literature and various reported pharmacological activities which can possibly provide prevention, control and reduction of complications of this deadly disease.

**INTRODUCTION**

Epidemics of infectious diseases have been documented throughout history. Ancient Greece and Egypt described epidemics of small pox, leprosy, tuberculosis, meningococcal infections and diphtheria.² Hippocrates was among the first to record his theories on the occurrence of disease in his treatise “Air, water, and places”, Hippocrates dismissed supernatural explanations of disease and instead attributed illness to characteristics of the climate, soil, water, mode of life, nutrition and surrounding of the patient.²³⁵ 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.³⁵ This viral disease was named “COVID-
January-June 2020

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. Research 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 lungs. 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 Nabi (Pulse) and Baraz (Stool), Usually Nabz becomes Sagheer wa Mutawatir, and the Baraz (stool) of infected person has foul smell.15,16

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.15,18 Hummae-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. Zakariya Razi (865–925 CE) stated in his book Kitab al Mansoori that most epidemics occur during the autumn season, mostly when previous summer season was humid, and the wind is still15, Razi in the 15th volume of his treatise Kitab al-Hawi (The Comprehensive Book of Medicine), also stated that change of temperature makes people more susceptible to respiratory infections and stressed this fact and stated that there will always be something common in patients of epidemics, whether a place, food, drink or travel history”19. Furthering the view, Ibn Sina (980-1035 CE) stated that epidemics spread from one person to another, and one city to another (Sina, 1878). During the 14th-century plague pandemic, Arabian scholar Ibn Khatib (1313–1374 CE) stressed that ‘most of the people who come in contact with a plague victim will die’. In the same context, he states, ‘the disease spreads through clothes, utensils and jewellery’.20,21 In the same vein, this statement stresses on social distancing and isolation, two important aspects of prevention during COVID 19 pandemic.

In Unani system of medicine, “Decreased Immunity Disorders” was documented by most prominent physicians in classical Unani literature. Unani medicine is rich with formulations useful in the prophylactic and therapeutic management of Nazla-e- wabaiya (epidemic influenza) and other flu like symptoms. In Unani Tib, “tabiyat” is considered as a real healer. In this regard, “majoosi” wrote quoting “Hippocrates” that “tabiyat” is the real restorer of health and curer of disease. If the tabiyat is strong enough and has not succumbed to the infection, a good and healthy sign is seen and that is the production of specific humours (immunoglobulins) against the microorganisms to get rid of the infection. The humours of these persons are similar to the putreace air so these people are susceptible to wabai amraz.22,23,24 Unani physicians had mentioned different diet schedule and preventive drug regimes including the use of muharrikat and tiryaqat to combat from these conditions incurred from weak tabiyat. Tyriage Arba is an age old pharmacopeial Unani compound formulation and is used in immune-compromised, weak and feeble patients and also this formulation is being used by old Unani Hakims, for treating catarrh and recurrent infections.25

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 beneficiates 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.”26,27
In *Unani* classical literature several single drugs as well compound formulations have been used for several decades which possess immune-stimulatory, antipyretic, expectorant as well as antiviral properties. *Tiryaq-e-Arba* is one of the *unani* formulations which has immune-stimulatory activity and its ingredients have expectorant and antipyretic, anti viral activities. *Tiryaq e Arba* was used by Avicenna and Galen in healthy persons as well as in patients during epidemics. Hakim Azam Khan has mentioned that *Tiryaq-e-Arba* is a good anti inflammatory, anti flatulent, resolvent and antidote. It is effectively used in the control and treatment of infectious diseases during the epidemic outbreaks such as cholera, plague, nazlae muzmin etc. Hakim Ghulam Jeelani has mentioned that *Tiryaq Arba* strengthens Heart and Brain.

**DESCRIPTION OF TIRYAQ- E-ARBA:**
The literal meaning of *Tiryaq* is antidote and *Arba* is an Arabic word, which stands for four. *Tiryaq e Arba* is a compound *Unani* formulation, consisting of four *mufrad* (single) drugs namely Zaravand Taveel (*Aristolochia longa*), Habbul Ghaar (*Laurus nobilis*) Pakhanbed or Juntiana romi (*Bergenia ligulata*) and Murmaki (*Commiphora myrrha*). It is also known by the name of “*Tiryaq Sagheer*” as per the book “*Bayaz Khas/ ilajul amraz*” of Hakim Shareef Khan, translated by Hakeem Mohammad Kabiruddin. The composition of the formulation is as follows:

<table>
<thead>
<tr>
<th>S. No</th>
<th>Name</th>
<th>Botanical Name</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Juntiyana / Pakhanbed</td>
<td>Gentiana lutea L. / (<em>Bergenia ligulata</em>)</td>
<td>1 part</td>
</tr>
<tr>
<td>2</td>
<td>Zarawand Taveel</td>
<td><em>Aristolochia longa</em> L.</td>
<td>1 part</td>
</tr>
<tr>
<td>3</td>
<td>Mur Makki</td>
<td><em>Commiphora myrrha</em> (Nees Engl.)</td>
<td>1 part</td>
</tr>
<tr>
<td>4</td>
<td>Habb ul Ghar</td>
<td><em>Laurus nobilis</em> L.</td>
<td>1 part</td>
</tr>
<tr>
<td>5</td>
<td>Honey or Sugar</td>
<td>Q.S</td>
<td></td>
</tr>
</tbody>
</table>

**Pharmacological Studies on ingredients of Tiryaq-e-Arba:**
*Tiryaq-e-Arba* is a well-known formulation for its different pharmacological activities as antiviral, analgesic, anti-inflammatory, anti-spasmodic etc. Some of the known pharmacological actions which are mentioned in Unani literature and proven scientifically are mentioned below:

1. **Juntiyana (Gentiana lutea L.):**
   - Anti-inflammatory and wound healing
   - Antioxidant activity
2. **Habb ul Ghar (Laurus nobilis L.):**
   - Antioxidant activity
   - Antiviral Activity
   - Immunomodulatory activity
3. **Zarawand Taveel (Aristolochia longa L.):**
   - Antioxidant activity
   - Immunomodulatory activity
4. **Murr Makki (Commiphora myrrha (Nees) Engl.):**
   - Antioxidant activity
   - Anti-inflammatory activity
THERAPEUTIC USES
Hakim Azam khan has mentioned that Tiryaq e Arba is a good anti inflammatory, anti flatulent, resolvent and antidote. It is effectively used in the control and treatment of infectious diseases during the epidemic outbreaks such as cholera, plague, nazlae muzmin etc. Hakim Ghulam Jeelani has mentioned that Tiryaqe Arba strengthens Heart and Brain. Effective antidote for poisons and toxins. Ibne sina has mentioned in Al Qanoon that Tiryaqe Arba is effective antidote against scorpion bites, spider poison and in treating all cold diseases. Its action includes Dafe Sumoom, Dafe Tashannuj, Mufattehe Sudad, Mudirre Baul. It's therapeutically used in Tasammmum, Tashannuj, Qulanj, Usre waladat, Tasaddude Urooq and Istisqa. Hakim Akbar Arzani has mentioned in his book Qarabadin e Qadri that Tiryaqe Arba is an antidote for scorpion bite and all animal poisons. It dissolves the ghaleez hawa, opens. It corrects liver and spleen. It is a first and oldest Tiryaq prepared by Indru makhiz which is Garm and Khushk. Its life span is 2 years. Hakim Mohd. Shariff Khan in his book Bayaze khas al maroof ilajul amraaz has mentioned that Tiryaqe Arba is also known as Tiryaqe sogheer and is Garm and Khushk. Antidote against all poisons including snake, scorpion and spider bites.

Mizaj: Garm and Khushk, Garm and Khushk.
Dosage: 6 gm BD

Table 2: Description of Ingredients of Tiryaq e Arba.

<table>
<thead>
<tr>
<th>S. No</th>
<th>Ingredients</th>
<th>Actions</th>
<th>Therapeutic Uses</th>
<th>Temperament</th>
<th>Parts used</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Habbul ghar (Laurus nobilis)</td>
<td>antifungal, antibacterial, anti-inflammatory, antioxidant, carminative,</td>
<td>Treats Suda e balghami, strengthens memory power, cures epilepsy, facial paralysis</td>
<td>Garm wa Khushk (Hot and Dry) and according to some Garm wa Khushk in degree.</td>
<td>Fruit and seeds</td>
</tr>
<tr>
<td></td>
<td></td>
<td>aromatic, diaphoretic, digestive, diuretic, emetic and stomachic properties</td>
<td>and hemiplegia. Effective in asthma, conductive deafness and tinnitus. Melts calculi and treats dysuria and dribbling of urine, antidote for all animal poisons, resolves inflammation of the chest and lung and treats all cold inflammations of the chest. Treats chronic cough and avoids falling of secretions and morbid matter on lungs.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Pakhan bedroni* (Bergenia ligulata)</td>
<td>Muqawie badan (general tonic), Muqavviye meda (strengthens stomach), Kasire riyah (carminative), Mudir baul o haiz (diuretic and emmenogogue) and Tiryae samoom (antidote for poisons).</td>
<td>Effective antidote in snake and scorpion poisons, useful in the treatment of Zoafe meda (stomach weakness), zoafe masana (bladder weakness) and darde meda (stomach ache). Useful as a diuretic, emmenogogue and also as an abortifciant drug.</td>
<td>Garmī wa Khushk', according to some Garmī wa Khushk*</td>
<td>Root*</td>
</tr>
<tr>
<td>3.</td>
<td>Mur mukki* (Commiphora myrrha)</td>
<td>Dafae tafoon (antiseptic), Mujaaffij (absorbent), Jaali (detergent), Kasire Riyah (antiflatulente), Muqawie Meda (strengthens stomach), Khatile Kirme Shikam (antihelmintic), Munaffise Balgham (expectorant), Muhalil (anti inflammatory) and Mufatteh (lithotriptic).</td>
<td>Useful in indigestion and to kill and expel intestinal worms, asthma, cough, dryness and hoarseness of voice, upper respiratory infections, rheumatoid arthritis, gout and sciatica. Helps in dissolving balghami inflmmations.</td>
<td>Garmī wa Khushk' (Hot &amp; Dry)</td>
<td>Leaves*</td>
</tr>
<tr>
<td>4.</td>
<td>Zaravand Taweel* (Aristolochia longa)</td>
<td>Tonic, stimulates uterus, reduces inflmmation, control bacterial infection and promotes healing emmenagogue, antiseptic, odontalgic, sudorific, antihelmenthic.</td>
<td>It's an antidote for plants and animal poisons. It absorbs the secretions and resolves cold inflmmations, removes. Balgham, resolves obstructions, melts calculi, glitters the facial skin, removes flatulence, brings about urination and menstruation. It checks chills and rigors in fevers and resolves the inflmmation in haemorrhoids. Strengthens visceral organs and resolves the inflmmation of spleen and splenomegaly.</td>
<td>Hot &amp; Dry, Hot &amp; Dry*</td>
<td>Roots, leaves, stem and flowers*</td>
</tr>
</tbody>
</table>

REFERENCES:


17. https://www.google.com/search?q=corona+virus+image&rlz=1C1EXJR


34. https://www.google.com/search?q=tiryaq+e+arba+images&tbm=isch&ved
42. Kabeeruddin HM, Al Qarabadeen, Central Council for Research in Unani Medicine, New Delhi, 2006; pp-1212.
43. Kabeeruddin HM, Al Qarabadeen-Volume II, Malik son's publishers, Faisalabad, YNM: pp-413
44. Kabeeruddin HM, Sharah Asbab-Volume III, Shaukat Book Depot, Gujrat, YNM; pp-180-186
46. *Anonymous*, Essential Drugs List-Unani Medicine, Ministry of AYUSH, New Delhi, 2013; pp. 2-4