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REVIEW ARTICLE **OPEN ACCESS**

Prescription Watch Analysis of Pharmacist Sales of OTC Formulations in Post Covid-19 Lockdown Period

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ABSTRACT

Clinical research on AYUSH medicines has the potential to advise policymakers at the national and international levels, disseminate vital knowledge to the scientific community at large, and serve as a foundation for future cross-institutional research initiatives. Notwithstanding the dense population and lack of health facilities in rural regions, the case fatality rate in India is much lower than in other nations, at less than 1.50 percent. One possible explanation is that Indians regularly employ a wide variety of immunomodulatory medicinal herbs and AYUSH formulations. "AYUSH-recommended formulations and constituents, commonly used medical plants and formulations by the Indian populace, and additional potential Indian medicinal plants that may be evaluated against COVID-19 are discussed in this message. Indian medicinal plants with known antiviral, immunomodulatory, and anti-allergic/anti-inflammatory effects are grouped for prioritizing in study. Further pre-clinical and clinical testing of the prospective traditional medicines against COVID-19 and SARS-CoV-2 are also highlighted", as are the traditional AYUSH medicines now being trialled against COVID-19. In light of this, it has been proposed that research into effective AYUSH formulations and Indian medicinal herbs should be given top attention in order to address the present emergency. This research examines the sales of OTC formulations through prescription watch observations.

KEYWORDS:*Health infrastructure, Communication, Ingredients, Medicinal Plants, Immunomodulatory.*

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INTRODUCTION

When it comes to delivering health care to human civilization, few things have been as important as "the Indian Traditional System of Medicine, which is one of the oldest medical practices in the world. Ayurveda, Yoga, Unani, Siddha, and Homoeopathy (AYUSH) are all forms of Indian traditional medicine that are acknowledged internationally" [1]. These methods, founded on well-established medical tenets, provide a path to a healthier way of life by focusing on tried-and-true strategies for illness prevention and wellness promotion. Each of these systems takes a holistic approach to healing, and its pharmaceutical methods are founded on plant, animal, or mineral substances. As a result, there has been a revival of interest in the AYUSH systems that proved useful during previous pandemic crises (plague, cholera, Spanish flu, etc.) [2]. Hence, new therapy possibilities may be found to address the present lethal epidemic by repurposing the traditional applications of Indian medicinal herbs and formulations. Every person on Earth is worried of contracting COVID-19 because of the pandemic's global impact. As there is currently no treatment for COVID19, it is crucial to take precautions like increasing your immunity and focusing on personal cleanliness. Several AYUSH traditional formulations have been used safely for millennia to treat respiratory problems and allergy conditions due to their well-known ability to modulate the immune system. As a preventative step in red zones, confinement zones, and for corona warriors, the Ministry of AYUSH (Govt of India) has listed forth such formulations. The COVID-19 patients are now testing several of them in clinical trials [3, 4].

Several of the medicinal plants utilized in Indian systems of medicine are native to the region and have been documented as having antiviral, immunomodulatory, and antiallergic/anti-asthmatic properties. Traditional formulations that have been used for centuries sometimes include several of these therapeutic herbs [5]. The objective of the study is to understand the sale of OTC formulations at the pharmacist level,

MATERIAL AND METHODS

Ayurveda, Yoga,Unani, Siddha, Homeopathy

Distancing oneself from others, practicing good hygiene and antiseptic measures (sanitizing one's environment), boosting one's immune system, and generally bettering one's health are only a few of the

broad preventative methods advocated by AYUSH systems of medicine to halt the transmission of disease (dietary modifications and drugs) [1].
Nevertheless, their significance in controlling COVID-19 has to be confirmed, and this article provides a brief overview of certain traditional Indian AYUSH formulations that have been shown to have "antiviral, anti-asthmatic, and immunomodulatory effects. In India, the Ministry of AYUSH, Ministry of Health and Family Welfares, and the Council for Scientific and Industrial Research (CSIR), with the technical support of the Indian Council of Medical Research, have begun conducting clinical trials on patients, health workers, and those working in high-risk areas using AYUSH medicines like Ashwagandha, Yashtimadhu, Guduchi, Pippali, and AYUSH-64 (ICMR)"
The Ministry of AYUSH (Government of India) has given numerous guidelines on how to treat COVID-19 at various points in time, each of which is based on one of the many different schools of Indian medicine. Hospitals, each with its own area of expertise, are adopting a variety of methods that may or may not be useful in treating COVID 19 as adjuvants to conventional medical care.

RESULST AND DISCUSSION

Government Purview on Prophylaxis and Cure

AYUSH kwath is a pre-mixed formulation backed by the "Ministry of AYUSH to improve public health. *Ocimum sanctum* L. leaves, *Cinnamomum verum* J. Presl. stem barks, *Zingiber officinale* Roscoe rhizomes, and Piper nigrum L. fruits make up this composition. Several brand names, including AYUSH Kwath, AYUSH Kudineer, and AYUSH Joshanda," are used to advertise the formulation in stores. You may buy it at the store as either a powder or a tablet. Reports indicate that these herbs are effective treatments for a number of different types of viral infections because they strengthen the immune system [2].

Table 1: Formulations in AYUSH against viral symptoms

S.No.	Medicines	Treatment of these
1	Samshamani Vati	Treatment of fever and inflammation
2	AYUSH-64	Its components are antiviral, anti-asthmatic, and immune-stimulating agents
3	Agasthaya Hareetaki	Its constituents have antiviral, anti-inflammatory, anti-inflammatory asthma, and immunomodulatory effects
4	Anuthaila	Asthma, bronchitis, and throat discomfort
5	Triyaq-e-Araba	Anti-viral drug
6	Roghan-e-Baboona	Anti- asthmatic and acute viral nasopharyngitis
7	Arq-e-Ajeeb	Anti-inflammatory agent
8	Khamirae-Banafsha	"For ailments of respiratory system like bronchitis, whooping cough, fever, as an expectorant and antipyretic"
9	Laooq-e-Sapistan	"For the treatment of cold and cough, whooping cough, and phlegm"
10	Sharbat-e- Sadar	"Used for common cold, cough and respiratory diseases"
11	Khameeramarwareed	To stimulate the immune system
12	AsgandhSafoof	Increases the CD4+ and CD8+ counts
13	Habb-e-Bukhar	Prescribed for elephantiasis and malarial fever

These have been discussed in detail further:

(1)**SamshamaniVati**

The ayurvedic medicine Samshamanivati (Guduchi ghanavati) is effective against any kind of fever. It is also a treatment for fever and inflammation. The synergistic action of the different components in Samshamanivati, an immunomodulator prepared from an aqueous extract of Tinosporacordifolia (Willd.) Miers (family Menispermaceae), has been documented. In addition, it has been shown to be effective against many different types of viruses [8].

(2) AYUSH-64

Both entire plant and seed pulp from the Caesalpinia crista L. are included in each AYUSH-64 pill. AYUSH-64's antimalarial properties make it a promising treatment option for those at high risk of

contracting a coronavirus. Its components, according to studies, are all powerful antiviral, anti-asthmatic, and immune-stimulating agents (Panda et al., 2017; Win et al., 2019; Woo et al., 2019)[7,9,10].

(3) Agasthaya Hareetaki

Haritaki Agastya More than 15 different herbs go into the making of the famous 'Avalehakalpana' known as Rasayana, which is "used to treat a wide variety of respiratory infections. Several of its constituents have been shown to have antiviral, anti-inflammatory, anti-inflammatory asthma, and immunomodulatory effects" [5]. Based on the aforementioned research, Agastya Haritaki's symptomatic treatment for COVID-19 is recommended.

(4) Anuthaila

Over twenty different substances make up Anuthaila; among them, "Leptadenia reticulate (Retz.) Wight and Arn has been linked to improvements in allergic reaction, asthma, bronchitis, and throat discomfort. *Sesamum indicum* L. oil is advised for dry cough, asthma, migraines, and respiratory infections, while *Ocimum sanctum* L. is recommended for a broad variety of ailments, including cough, asthma, fever, and malaria. S. indicum seeds mixed with *Tachyspermumammi* (L.) Sprague seeds have been studied for their effects on dry cough, asthma, lung disorders, and the common cold". Using the aforementioned works, Anuthaila defends the need of using it during a corona virus pandemic.

(5) Triyaq-e-Araba

A key Unani composition, Triyaq-e-Araba is a powerful detoxifier. The formula is made up of the roots of Aristolochiaindica L., the berries of *Laurusnobilis* L., the stem of Bergenia ciliate (Haw.) Sternb., and the resin of *Commiphora myrrha* (Nees) Engl. Against SARS-CoV, among other viruses, it has been found to be very effective as an antiviral drug. In addition, B. ciliata is effective against influenza A virus and herpes simplex virus type 1 (HSV-1), while its active component, bergenin, is effective against hepatitis C virus (HCV) and HIV virus. This research suggests that Triyaq-e-Araba may be one of the most effective antiviral medicines and provides official certification for its usage against COVID-19.

(6) Roghan-e-Baboona

Roghan-e-Baboona is anUnani remedy utilized as an anti- asthmatic and for the treatment of inflammatory complaints. Flowers of *Matricaria chamomilla* L. are the main ingredient of Roghan-e-Baboona. It is composed of the flowers of M. chamomilla, which is found effective for acute viral nasopharyngitis, as well as for sore throat.

(7) Arq-e-Ajeeb

Arq-e-Ajeeb is a liquid preparation that contains thymol, menthol, and camphor. Thymol is a promising candidate for topical application as an antiviral agent for herpetic infections. Menthol has been reported as an anti-inflammatory agent. The Unani physicians have a very successful history of treating Nazlawabai (Swine flu) using Arq -e-Ajeeb. These studies support the use of Arq-e-Ajeeb for COVID-19.

(8) Khamira-e-Banafsha

Khamira-e-Banafsha is a semi-solid Unani formulation prepared by adding decoction of flowers of Viola odorata L. to a base of sugar or sugar with honey and used for cold-cough as expectorant and for the treatment of ailments of respiratory system and chest diseases, bronchitis, whooping cough, fever, expectorant, antipyretic etc. Further, V. odorata has been reported to suppress the viral load and increase antiretroviral drug efficacy (Gerlach et al., 2019)[3], decrease the thickness of the alveolar wall, hemorrhage area, and alter the epithelial lining of bronchioles of the lungs. The above literature supports its use for the management of COVID-19.

(9) Laooq-e-Sapistan

"Laooq-e-Sapistan is a semisolid sugar-based polyUnani formulation extensively used by the masses in India for the treatment of cold and cough, whooping cough, and phlegm [5]. It reduces inflammation of the pharynx, tonsils, and irritation or infection. The jelly like sticky mass of ripe fruit of Cordiamyxa L. is the main ingredient, which has been reported as antiviral and antitussive. Another important constituent is Ziziphus fruit, which contains betulinic acid. Literature showed the down-regulation of IFN-γ level by betulinic acid in mouse lung, thus enhancing immunity andsuggested as potential therapeutic agent for viral infections. Aqueous extract also reported increasing thymus and spleen indices as well as enhance the T-lymphocyte proliferation, hemolytic activity, and natural killer (NK) cell activity. Viola odorata L., one of its ingredients, suppresses the viral load [3]. Hence, the literature supports the use of AYUSH formulation Laooq-e-Sapistan in COVID-19."

(10) Sharbat-e-Sadar

"Sharbat-e- Sadar is an Unani polyherbal syrup formulation and is widely used for common cold, cough and respiratory diseases. *Trachyspermum ammi* (L.) Sprague, an important ingredient, reported to neutralize antibodies for Japanese encephalitis virus and a glycoprotein was found to proliferate B-

cells. *Adhatoda vasica* Nees inhibits HIV- Protease, *Bombyx mori* was reported to increase immune responses against viral infection. Other ingredients such as *Glycyrrhiza glabra* L., *Ficus carica* L., *Onosmabracteatum* Wall., and *Ziziphus jujuba* Mill. also possess the antiviral and immunomodulatory activities, as summarized".

(11) Khameera Marwareed

"Khameera marwareed is a compound, sugar-based, semisolid Unani formulation used as an immunomodulator. It has been reported to stimulate the immune system through T helper 1 (Th1) type cytokine response and maintains the body in a healthier position to fight against viral infections. Its ingredients showed powerful antiviral activities by inhibiting replication."

(12) Asgandh Safoof

Asgand (*Withania somnifera* (L.) Dunal) is a "very popular Indian medicinal plant. The root powder is used in the Unani system of medicine as an immunomodulator. It is reported that the root's extract significantly increases the CD4+ and CD8+ counts and blood profile, especially WBC and platelet counts.""" Aqueous suspension showed potent inhibitory activity toward mitogen-induced proliferative response of T-lymphocytes and prevent SARS-CoV-2 entry by disturbing connections between viral S-protein receptor binding domain and host ACE2 receptor. The above literature supports the preventive use of Asgandh safoof against COVID-19".

(13) Habb-e-Bukhar

"Habb-e-Bukhar is a polyherbal tablet formulation of Unani system of medicine, prescribed in elephantiasis and malarial fever. The main ingredient of Habb-e-Bukhar is cinchona bark."

CONCLUSION

Further pre-clinical and clinical testing of the prospective traditional medicines against COVID-19 and SARS-CoV-2 are also highlighted, as are the traditional AYUSH medicines now being trialled against COVID-19. Clinical research on AYUSH medicines has the potential to advise policymakers at the national and international levels, disseminate vital knowledge to the scientific community at large, and serve as a foundation for future cross-institutional research initiatives. In light of this, it has been proposed that research into effective AYUSH formulations and Indian medicinal herbs should be given top attention in order to address the present emergency.

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