



Preventive measure and Use of Herbal medicine for CoVID-19

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ABSTRACT

Worldwide more than 168 countries is scuffling with the of COVID-19. The highly contagious CoVID-19 is asserted as pandemic and public health emergency of international concern declared by UN agency. SARS-CoV-2 to responsible agent for this health emergency exhibited similitude with SARS-CoV. Each these Corona viruses are animal disease and belong to an oversized family of viruses Coronaviridae. Corona Virus particle is formed from four major structural proteins parts, specifically spikes (S), nucleocapsid (N), membrane (M), and envelope (E) encoded by virus. The Pandemic causative agent Corona virus is named as SARVS-Co2 because of supermolecule of virus shows similarity to S supermolecule of SARS-CoV. COVID-19 spreads from person to person, and this makes it additional vulnerable for inflicting infection and highly contagious. The Objective of review study is to provide information about available therapy, guidelines and preventive measures during outbreaks. This review discusses the possible role of Chloroquine medicine for the management of COVID-19.

KEYWORDS; Corona virus Disease 2019, Severe Acute Respiratory Syndrome (SARS), Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)

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INTRODUCTION

Many efforts are taken to seek out preventive measure for pandemic outbreak. Researchers across the world are operating to seek out effective vaccination for Corona virus or SARS-CoV2. There is no immunizing agent or medication accessible until date for COVID-19. Preventive measures like social distancing, awareness, maintenance of hygiene, isolation, and movement restrictions will facilitate and guideline for individuals during this pandemic outbreak of a COVID-19 is still a research question. The SARS-COV a pair of or COVID-19 is emerged as world pandemic declared by the Health agency /WHO with 3,85512 cases and across 159 countries till 10th May, 2020 and accounts for 265862 deaths globally [1]. The severity of COVID-19 will be simply understood by the exponentially increasing cases worldwide. Some countries like Pakistan registered more than 19500 single day increase in corona virus new cases [2].

The virus affects multiple system of body including GIT, Pulmonary, CVS and Immune system and seems as a significant threat through-out the globe once 1918 Spanish respiratory disease (H1N1) Epidemic. COVID-19 is one among the extremely infectious diseases with the flexibility to have an effect on an oversized population globally and might cause severe impact on socioeconomic stability of developing countries [2]. The following observations are based on recent study in China during Covid19 pandemic individual have some symptoms and signs more commonly present are Fever in 99% of Covid19 cases, Fatigue 70%, dry cough are 59% and Loss of appetite is noted to be 40%, Body aches in 35% of infected people and Shortness of breath seem in 31% of individuals [3].

Mucus or phlegm (it's greenish, yellowish colored, or thickened mucus) is found in 27% of suspected humans [4]. The emergence of SARS-CoV traces back to year 2003 from China, and once more another mutant emerged in 2012 referred to as MERS from Asian nation. All the 3 extremely infectious strains of CoV are found to be animal disease and transmitted from animals to Humans [5]. The strain was utterly novel and unknown to scientific fraternity at the time of its natural event. The novel coronavirus or COVID-19 is very infectious and spread so quickly through people-to-people contact [7]. The emergence of animal disease Corona virus strains create huge threat to the human population and wish to addressed strategically with speedy response [7]. The SARS-CoV-2 could be a novel coronavirus and is classed into virus family of Coronaviridae. Coronaviruses belong to massive Coronaviridae family of viruses inflicting infection leads from health problem respiratory disorder and communicable disease} to severe illness and metastasis diseases. As per the studies conducted by numerous analytic review worldwide, the COVID-19 similarity with bat coronavirus, and it belongs to beta coronavirus cluster of Coronaviridae family [7].

Emergence of COVID-19 has drawn considerably attention of researchers and health professionals attributable to its high infection potential and novel structure. Researchers found the steadiness of SARS-CoV-2 on varied surfaces and compared constant with SARS-CoV-1. [19]. SARS-Co2 is RNA virus consisting of 26–36 positive sense RNA ordering, the entire virus particle is created from four major structural proteins, particularly spikes (S), nucleocapsid (N), membrane (M), and envelope (E) encoded by virus ordering (Forni *et al.* 2017). The morphology of SARS-CoV-2-encoded proteins shows similarity to bat SARS-CoV. The necessary distinction is longer length and structure of S macromolecule of SARS-CoV-2 as compared to SARS-CoV and bat SARS-CoV discovered by researchers. [10, 11]. These S proteins area unit terribly crucial for receptor binding, membrane fusion, acquisition of the SARS-CoV-2, tissue reaction, and host array. This S macromolecule could also be utilized as important target for immunogenic or Antibodies development [7]. Extensive efforts area unit already taken to manage COVID-19 unfold and for the event of effective vaccines round the world. Vaccine development are still in clinical trial and need FDA approval.

USE OF HERBAL MEDICINE FOR CoVID-19

It is discovered that variety of extract of *Anthemis hyaline*, *Citrus sinensis*, *Sophorae radix*, *Sanguisorbae radix* are most recently used herbal medicine for CoVID-19. *Nigella sativa*, and *Torilis fructus* inhibit coronavirus replication in vitro [12, 6].

Nigella sativa (*N. sativa*) widely used in numerous traditional systems of herbal medicine It belong to Family Ranunculaceae, a famous medicinal plant throughout the world. It has been recommended in Unani and Tibb traditional system and also used as liver tonic in Ayurveda and Siddha culture. Extract oil and Seeds have been widely used as antihypertensive agent in various systems of medicines and food [13]. The seeds of *N. sativa* have been widely used in the treatment of different diseases and ailments [14]. In Islamic literature, it is considered as one of the greatest forms of healing medicine. It is very popular in Islamic culture, it is advised to use in anti-bacterial and in skin Diseases. In Prophetic Medicine (Tibb-e Nabwi) it has been recommended for various diseases and it's a saying it has a cure for almost all disease except Death and its beneficial effect has been studied its use as anti-diarrheal, appetite stimulant and Potential role as antioxidant. The present study summarize the mediated emerging effects of the chloroquine *Nigella sativa* oil (NSO) in improving the human health systematically CNS, Respiratory System and reproductive system.

CHLOROQUINONE EFFECTIVENESS FOR CoVID-19

Chloroquinone is drug of choice for falciparum a malarial and names as antimalarial drug. It is derived from *Sativa* leaves. *Nigella Sativa* Recent studies on Chloroquine use for COVID-19 in combination with other antioxidant and antiviral drug is ongoing debate by Iyer, Farquhar and Jepson 28. Black seed essential oil have higher phenolic content [12]. Studies show NSO has a protective effect on the myocardium of streptozotocin-induced diabetic rats, most likely via suppressing apoptosis and now its effect on Myocarditis induced by COVID19 is need to be explore.

Chloroquinolone is drug of choice in Lupus erythematosus and alleviate the symptom of SLE including joints pain, skin rashes and allergies, protecting the kidneys, persevering the blood cells, myocardium, and alveoli. Some studies showed that bioactive compound present in *N. sativa* have anti-inflammatory influence by plummeting CRP levels in the blood [14].

ACTIVE CONTENTS AND INGREDIENT OF NIGELLA SATIVA

Thymoquinones are crucial Bioactive compound among several bioactive phytochemical compounds present in the seed of *N. sativa* have been reported in the literature. Studies shows that significant

proliferation of glutathione was perceived in mice likely due to Thymoquinone's anti-oxidant activity and inhibition of the development of acute and chronic relapsing experimental autoimmune encephalomyelitis (EAE) in C57BL/6J mice gene expression. Other foremost phytochemicals described from various varieties of *N. sativa* include Phenol and saponins, Unsaturated fatty acids, alkaloids, and novel volatile oils of varying composition [15, 16]. Studies show that black seed or *Nagella sativa* contain forty Bioactive compounds, identified are trans-anethole, p-cymene, thymoquinone, longifolene, other enlisted are β -pinene, and carvacrol and limonene, carvone are antifungal while antibacterial activity also shown by *N. Sagella* seed extract like α -thujene, thymohydroquinone (THQ), dithymoquinone, carvacrol, α -pinene (T. Ainane et al 2020). Extracted oil contain 32-40% unsaturated fatty acid mainly, linoleic, linolenic, oleic and some saturated fatty acids have also been reported most likely palmitoleic, palmitic acids, stearic, and myristic acid together with arachidonic, eicosadienoic also reported by various authors [17]. A new dienoate and two known monoesters along with novel lipids have been isolated from the un saponified extract of the seed, namely methylnonadeca-15,17-dienoate, pentyl hexadec-12-enoate, and pentylpentadec-11-enoate. Phytosterols are important part of human diet and are gaining greater interest due to their nutraceutical and medicinal benefits in lowering low density lipoprotein and total cholesterol level and have very health effects on lipid profile [18]. Phyto sterols are also important as characteristic compounds for assessing the quality of vegetable oils and food labeling. Extensive studies on *N. sativa* have been carried out by various researchers and a wide spectrum of its pharmacological actions have been explored which may include antidiabetic, anticancer, immunomodulator, analgesic, antimicrobial, anti-inflammatory, spasmolytic, bronchodilator, hepatoprotective, renal protective, gastro-protective, antioxidant properties, etc. Due to its miraculous power of healing, *N. sativa* has got the place among the top ranked evidence based herbal medicines. This is also revealed that most of the therapeutic properties of this plant are due to the presence of thymoquinone which is major bioactive component of the essential oil. The present review is an effort to provide a detailed survey of the literature on scientific researches of pharmacognostical characteristics, chemical composition and pharmacological activities of the seeds of this plant [18].

RECOMMENDED THERAPY FOR STRENGTHEN IMMUNITY /HOST RESPONSE

Following is the Therapy, advices, and practices adopted inside the Isolation Hospitals/Centres for Covid19 infected in the Western world for boosting up human immunity;

1. Vitamin C-1000
2. Vitamin E (E) and Vitamin D
3. Make routine, sitting in the sunshine from 10 am to 11am for about 15-20 minutes.
4. Take Egg meal once daily.
5. Take rest / sleep for 7-8 hours at minimum.
6. Drink 1.5 liters of water daily.

All of above are used to strengthen the immune system of an individual.

The pH in which novel coronavirus thrives, varies from 5.5 to 8.5.

Therefore, all we have to do is to eliminate the virus by consuming more alkaline foods, which should be above the acidity level of the novel Coronavirus. Taking lemon with warm water, will eliminate the novel coronavirus at its first entry at naso or oropharynx at the beginning, and before it reaches the lungs.

Some other fruits and health may also help full are :

- Green lemon - has 9.9 pH
- Yellow Lemon - has 8.2 pH
- Avocado - has 15.6 pH
- Garlic - has 13.2 pH
- Mango - has 8.7 pH
- Tangerine - has 8.5 pH
- Pineapple - has 12.7 pH
- Watercress - has 22.7 pH
- Oranges - has 9.2 pH

HOME/ HOSPITAL ISOLATION

Symptoms like fever and dry cough usually begin 2 to 14 days after one come into contact with the novel coronavirus. Other symptoms may include sore throat, Headache, Chills, sometimes with shaking and Nausea vomiting. If one have any of the above symptoms, one should isolate him or herself [8].

This means staying away from other people as much as possible, even members of your family. Stay in a specific "sick/isolated room," and use a separate bathroom if one can.

If you have the above symptoms; and at same time fall in high risk of complications, because of your old age or having other health conditions, like diabetes, heart complaints etc. One must call doctor OR visit Health Facility/Hospital in addition to the act of isolating oneself. Avoid gathering, because it inhibits its geometrical progression and flatten the curve.

OTHER PREVENTIVE MEASURES

These are :

Imposing travel restrictions from and to the affected countries.

Interference transmission by maintaining high-level hygienically condition in home and surroundings.

Spreading awareness among public. Use of masks and protecting garments by infected, elderly, and immunocompromised people to avoid unfold of infection or from protective self from COVID-19. Maintenance of excellent immunity, consumption of nutrient diet, consumption of vitamins particularly C and E with yoga and exercises facilitate in fighting with COVID-19 infection. Social distancing, because the virus will transmit from person to person, i.e., maintain social distance, is extremely counseled. Precaution is better than cure absolutely fits for COVID-19.

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