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IP International Journal of Comprehensive and Advanced Pharmacology

Journal homepage: <https://www.ijcap.in/>

Editorial

Herbal drugs as immune-modulators in case of COVID-19

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ARTICLE INFO

Article history:

Received 19-06-2021

Accepted 17-09-2021

Available online 28-10-2021

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Current scenario tells us that the world is severely affected by covid-19 pandemic; Dec 2019 corona virus came into existence and changes our life completely. Prime motto is to take the safety precautions like wearing masks, using sanitizers, staying indoors and maintaining social distancing and strengthen the immunity.¹ This Disease is communicated by a Novel corona virus which is also known as acute respiratory syndrome corona virus 2 i.e. SARS-CoV2. This virus belong to seventh coronaviridae family which is responsible for infecting the human beings.^{2,3} The major reason fast spread of this disease is due to close contact with infected person through droplets either from sneezing or coughing.⁴ this disease is having variety of symptoms and the symptoms are mild to severe. Majority of patient shows the fever followed by cough, myalgia and fatigue. Sputum production and headache is also seen. Sometimes virus directly attacks the alveolar epithelial cell which may lead to respiratory failure which may be fatal to patient.⁵

This small virus affects the drug to that large extent because of lack of drugs medicines and vaccines as well so to beat this condition one can follow all the rules and regulations regarding covid-19 and boost immunity.¹

Ayurveda and some traditional Chinese medicines from vedic period 1600-500 BCE, giving world the potential medicines to boost the immunity and cure against illness caused by micro-organism.⁶ Drugs from ayurveda

having wide range of effectiveness against various micro-organisms without showing any side effect. By taking herbal drugs or medicines which are having active chemical constituent which may be having therapeutic effect like anti-inflammatory, antiviral, etc.⁷ Curcuma longa widely used as ayurvedic drug because of its effects like anti-oxidants, anti-inflammatory, anti mutagenic, anticancer, antimicrobial effects.^{8,9}

The drugs containing active constituents like flavanoids, proanthocyanidins, saponins, monoterpenoids, triterpenoids, glucosides, sesquiterpenes, and alkaloids shows activity against viral infections.¹⁰ Ashvagandha, giloe, tulasi, cardamom, cinnamon, cinchona, turmeric, amla, black pepper, fennel, garlic are some common examples of drugs used from the ancient times to cure multiple diseases. In india generally all this herbs are used in the day to day activities and some of the herbs are integral part of the Indian kitchen. Almost all the drugs having immunomodulatory activities. All this drugs are very common Indian day to day life. Every Indian no matter what religion, financial conditions, Geographical state, community they belong one of the above mentioned drug is used daily. All the drugs potentially proven for their immune modulatory, anti-oxidant and anti inflammatory properties. Because of that only the death rate in india is lower than others.¹¹

Glycyrrhiza Glabra roots are used in treatment of bronchitis and gastritis from ancient times. It is also having anti-oxidant and anti-inflammatory property.

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Citrus Limon (Lemon)-Lemon is rich in vitamin C and it is also used to relieve cough and used as expectorant in bronchitis. It is also used as anti-inflammatory for sore throat.¹²

Ginger *Officinalis* (Ginger)-Many preclinical studies reports analgesics, expectorant, anti-pyretic and anti-inflammatory effect. It is also effective in common cold and cough, asthma.^{13,14}

The dictioction of ginger, colve and piper nigrum provides humeral and cell mediated response to healthy as well as covid-19 infected person. It also reduces the nasal congestion. The drug like Tulsi is present in every home garden also having wide range of effects like anti-microbial aromatic etc.^{15–17}

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Cite this article: Phalke Pallavi L, Thitame Sonal A, Nawale Akshada S. Herbal drugs as immune-modulators in case of COVID-19. *IP Int J Comprehensive Adv Pharmacol* 2021;6(3):94-95.