



INTERNATIONAL JOURNAL OF RESEARCH IN PHARMACEUTICAL SCIENCES

Published by JK Welfare & Pharmascope Foundation

Journal Home Page: www.ijrps.com

COVID-19 Pandemic: Home Remedies for Immunity Boosting

Prashant Bhokardankar¹, Bharat Rathi^{*2}, Mujahid Khan³, Renu Rathi⁴¹Department of Rasashastra Bhaishajya Kalpana, Datta Meghe Ayurveda Medical college Hospital and Research Centre, Nagpur, Maharashtra, India²Department of Rasashastra & Bhaishajya Kalpana, Mahatma Gandhi Ayurveda College Hospital & Research Centre, Salod (H) Wardha (MS) - 442001, Datta Meghe Institute of Medical Sciences (Deemed to be University), Sawangi (M), Wardha (MS), India³Department of Rasashastra and Bhaishajya Kalpana, Mahatma Gandhi Ayurveda College Hospital and Research Centre, Salod (H), Wardha (MS), Datta Meghe Institute of Medical Sciences (Deemed to be University), Sawangi (M), Wardha (MS) - 442001, India⁴Department of Kaumarbhritya, Mahatma Gandhi Ayurveda College Hospital and Research Centre, Salod (H), Wardha (MS), Datta Meghe Institute of Medical Sciences (Deemed to be University), Sawangi (M), Wardha (MS) - 442001, India

Article History:

Received on: 06 Jun 2020

Revised on: 20 Jul 2020

Accepted on: 28 Jul 2020

Keywords:

COVID-19,
Home remedy,
Immunomodulant,
Herbal drugs

ABSTRACT

COVID- 19 has created a lot of hazardous health issues worldwide. Research fraternity around the world is trying to find out vaccine or medicines against the virus. In this pandemic situation, there is a need for remedies to boost the immunity to fight against the virus. Ayurveda treatises have described several herbal drugs which are used as home remedies and are said to be effective against all microorganisms and effective in boosting immunity. Home remedies can be played a vital role as immunomodulant. Hence in this paper, an attempt is made to review such home remedies and identify its efficacy on various conditions. The relevant references were searched on the internet to find out the scientific data available on home remedies. Fumigation, Rasayan drugs, a decoction of herbal medicines found more useful. *Tinospra cordifolia*, *Glycyrrhiza glabra*, *Ocimum sanctum*, *Withania somnifera*, *Curcuma longa* are most decorated single herbal drugs used as home remedies for boosting the immunity. Considering the global disease burden caused by COVID-19, there is an urgent need to explore and widened the use of home remedies to fight against COVID-19 menace effectively.



*Corresponding Author

Name: Bharat Rathi

Phone: 91- 9011058301

Email: bharat.rathi@dmimsu.edu.in

ISSN: 0975-7538

DOI: <https://doi.org/10.26452/ijrps.v11iSPL1.3075>

Production and Hosted by

IJRPS | www.ijrps.com

© 2020 | All rights reserved.

INTRODUCTION

In 2019 World Health Organization (WHO) indicated that new viral infection is going to develop and create difficulties for the wellbeing of people. Over the most recent twenty years, a few viral infections, for example, the extreme intense respiratory disorder coronavirus (SARS-CoV) from 2002 to 2003, and H1N1 flu in 2009, have been recorded. Most as of late, the Middle East respiratory disorder coronavirus (MERS-CoV) was first identified in Saudi Arabia in 2012. The infection that arrives at the current day, huge cases with unexplained low respiratory diseases identified in Wuhan. It is the most signif-

icant metropolitan zone in China's Hubei area, was first reported to the WHO Country Office in China, on December 31, 2019, the Chinese Center for Disease Control and Prevention (CDC). The aetiology of this disease was described as a new infection having a place with the coronavirus (CoV) family.

On February 11, 2020, the WHO reported that the sickness brought about by this new CoV was a "COVID-19," which is the abbreviation of "coronavirus illness 2019". In the previous twenty years, two other CoVs scourges have happened. This new infection is, by all accounts infectious and has immediately spread all over the world.

On January 30, 2020, WHO announced COVID-19 as a pandemic, a Public Health Emergency of International Concern (PHEIC) as it had spread to 18 nations with four nations revealing human-to-human transmission. At first, the new infection was called 2019-nCoV.

Therefore, the era and of specialists of the International Committee on Taxonomy of Viruses (ICTV) named it the SARS-CoV-2 infection as it is fundamentally the same as the one that caused the SARS flare-up (SARS-CoVs) (Nisargandha and DadaraoParwe, 2020).

The CoVs have become the significant pathogens of developing respiratory sickness flare-ups. They are a large group of single-abandoned RNA infections that can be disengaged in various creature species. On March 11, as the quantity of COVID-19 cases outside China has expanded multiple times, and the number of nations included has significantly increased with more than 118,000 cases in 114 countries and more than 4,000 fatalities. WHO proclaimed the COVID-19 a pandemic.

All over the world governments are busy working on setting up countermeasures to control the disorder. Researchers around the globe started working to find out data about the transmission systems, the clinical range of infection, new diagnostics and vaccines (Rathi et al., 2020a). There is currently no cure for COVID-19 or a vaccine against coronavirus as well as there are no available antibodies or explicit medicines for the treatment of COVID-19. The people who are in quarantine, as well as the common man, can take the home remedies due to its availability, easy dispensing, palatability and efficacy and it helps to boost the immunity against the virus (Rathi et al., 2019).

Most people around the world are asymptomatic or mild infection, which can be treated at home. The symptoms of COVID-19 are fever, cough and shortness of breath. In severe cases, pneumonia may hap-

pen and ultimately lead to organ disappointment and even death (Rathi and Rathi, 2020b).

Currently, considering the infection different treatment modalities have been thought of including herbal medication, which has been broadly utilised during the past pandemic conditions such as severe intense respiratory condition (SARS) and H1N1 influenza. In this article, we try to find out the use of home formulas in the lockdown condition of COVID-19.

Aim

To find out the data available on home remedies to treat the COVID-19.

MATERIALS AND METHODS

Comprehensive internet search was done to find the out the scientific data available on home remedies for COVID-19 condition.

Observation and Results

On search, following home remedies and processes were found effective against infectious diseases.

Fumigation

Study on the use of Garlic (*Allium sativum*), Haldi (*Curcuma longa*), Ajwain (*Trachyspermum Ammi*) seeds and Loban (resin of *Styrax benzoin* and *Boswellia* species), Guggulu (*Commiflora waghatti*), Neem leaves found useful for disinfection of home premises for covid 19 like conditions (Bhatwalkar et al., 2019).

Rasayan

Rasayana as mentioned in Ayurvedic texts can be promising concept of remedies in viral disorders. It acts as antioxidant, anti-stress, anti-inflammatory, anti-microbial, vaccine adjuvant, and confer immunity against diseases (Rastogi, 2010).

Rasayana like Brahma Rasayana, Chyavanprasha or Amrit Bhallataka shows promising immunomodulant activity (Sharma et al., 2019; Rege et al., 1999).

Kwatha (decoction)

Tinospora cordifolia, Zingiber officinale, Curcuma longa, Ocimum sanctum, Glycyrrhiza glabra, Adhatoda vasica, Andrographis paniculata and Swertia chirata decoction found useful because these herbs are anti-virals and protease inhibitors (Rege and Chowdhary, 2014; Panche et al., 2019).

Dept of AYUSH, Govt of India also published an advisory for the sake of public interest and advised to use culinary herbs, spices like turmeric and herbal tea with ginger to protect from the COVID-19 menace effectively (Rathi et al., 2020b).

Herbal Remedies

Glycyrrhiza glabra (Liquorice)

Cristina Fiore et al. studied that *Glycyrrhiza glabra* in vitro studies revealed anti-viral activity against HIV-1, SARS related coronavirus, respiratory syncytial virus, arboviruses, vaccinia virus and vesicular stomatitis virus (Fiore et al., 2008).

Tinospora cordifolia (Guduchi)

Study on novel polysaccharide from the Ayurvedic plant *Tinospora cordifolia* suggests that it has Immune stimulating property (Nair et al., 2004). Dry stem crude extract of Guduchi can be used as an excellent immunomodulator in mice as it contained Polyclonal B cell mitogen (Desai et al., 2002). *Tinospora cordifolia* is shown macrophage activation hence act as an excellent in immunity enhancer (More and Pai, 2011).

Oscium sanctum (Tulsi)

Tulsi is considered a valuable plant in Ayurveda due to its rich medicinal properties and shows various favourable effects on the human body. Tulsi leaves are used to pacify the Kapha and Vata (Singh et al., 2002). Tulsi is widely used in the form of decoction and juice to treat pain, diarrhoea, cough and fever which are the common symptoms of COVID-19 (Mohan et al., 2011; Pattanayak et al., 2010) Study on methanol extract of *Ocimum sanctum* revealed that it acts as an anti-viral agent (Jadhav et al., 2012). thus Tulsi boosts the immunity of the body and helps to defend the threatening bacteria and virus (Mondal et al., 2009).

Withania somnifera (Ashwagandha)

An active constituent of *Withania somnifera* Ayurvedic herb has a broad range of medicinal properties including its anti-viral activity, especially the potential to control the neuraminidase of H1N1 influenza (Cai et al., 2015). WB365, a proprietary combination of Maitake mushroom-derived glucan and Ashwagandha extracts, has shown a strong effect related to immune health and stress reduction (Vetvicka and Vetvickova, 2011). One more study indicated that Ashwagandha could be used as immunomodulant while it studied in cyclophosphamide-induced toxicity in rats (Ali et al., 2015).

Curcuma longa Linn (Turmeric)

Curcuma longa is a potent anti-viral. Aqueous extract of turmeric shows good activity in HBV Hepatitis B virus. Hence strongly recommended to be used as a home remedy for the condition like COVID 19 (Kim et al., 2009). It is advised to take its powder with milk.

Nasya

It is one of the significant panchakarma technique mentioned in Ayurveda for various disorders. In this process, medicated oils administered through the nasal route. Use of coconut oil or Virgin coconut oil can be useful as anti-viral as mentioned by various scientists in their studies (Esquenazi et al., 2002; Rathi and Rathi, 2020a).

Discussion

Home remedies have enough potential and functional outcomes to be utilised both for prevention and treatment of COVID-19. Above mentioned remedies are readily available in the house of the common people. The scientific studies indicated that there is a great chance to use of these remedies against COVID 19 prevention and as immunomodulant.

The scientific fraternity must emphasis for wise use of these remedies for the better purpose in a pandemic. COVID-19 like pandemic is an example of Prakriti-prakopa by man and lessons should be learnt to avoid the same in future by adopting these Ayurveda preventive measures and safe lifestyle.

CONCLUSIONS

The best way to keep well in a pandemic is by boosting the immunity system to make the fight against viral disease like COVID 19. We can fight if we have an excellent immune system and health to survive in pandemic situations. The review article highlighted the promising use of home remedies for the prevention as well as the immunomodulant role of these remedies, which are readily available at a little cost.

There is a greater need for further research primarily clinical trials for the further confirmation of these studies and their extensive use across the globe for the pandemic situation like COVID-19.

ACKNOWLEDGEMENT

Author would like to thank DMIMSU for motivating and providing all necessary help for writing this article.

Funding Support

The authors declare that they have no funding support for this study.

Conflict of Interest

The authors declare that they have no conflict of interest for this study.

REFERENCES

- Ali, M., Sansthan, M. C., Parvej, S., Kumar, R. 2015. Immunomodulatory effect of *Withania somnifera* (ashwagandha) on cyclophosphamide induced toxicity in rats. *American Journal of PharmTech Research*, 5(3):638-645.
- Bhatwalkar, S. B., Shukla, P., Srivastava, R. K., Mondal, R., Anupam, R. 2019. Validation of environmental disinfection efficiency of traditional Ayurvedic fumigation practices. *Journal of Ayurveda and Integrative Medicine*, 10(3):203-206.
- Cai, Z., Zhang, G., Tang, B., Liu, Y., Fu, X., Zhang, X. 2015. Promising anti-influenza properties of active constituent of *Withania somnifera* ayurvedic herb in targeting neuraminidase of H1N1 influenza: computational study. *Cell biochemistry and biophysics*, 72(3):727-739.
- Desai, V. R., Kamat, J. P., Sainis, K. B. 2002. An immunomodulator from *Tinospora cordifolia* with antioxidant activity in cell-free systems. *Journal of Chemical Sciences*, 114(6):713-719.
- Esquenazi, D., Wigg, M. D., Miranda, M. M., Rodrigues, H. M., Tostes, J. B., Rozental, S., da Silva, A. J., Alviano, C. S. 2002. Antimicrobial and antiviral activities of polyphenolics from *Cocos nucifera* Linn. (Palmae) husk fiber extract. *Research in Microbiology*, 153(10):647-652.
- Fiore, C., Eisenhut, M., Krausse, R., Ragazzi, E., Pellati, D., Armanini, D., Bielenberg, J. 2008. Antiviral effects of *Glycyrrhiza* species. *Phytotherapy Research*, 22(2):141-148.
- Jadhav, P., Kapoor, N., Thomas, B., Lal, H., Kshirsagar, N. 2012. Antiviral potential of selected Indian medicinal (ayurvedic) plants against Herpes Simplex Virus 1 and 2. *North American Journal of Medical Sciences*, 4(12):641-641.
- Kim, H. J., Yoo, H. S., Kim, J. C., Park, C. S., Choi, M. S., Kim, M., Ahn, J. K. 2009. Antiviral effect of *Curcuma longa* Linn extract against hepatitis B virus replication. *Journal of ethnopharmacology*, 124(2):189-196.
- Mohan, L., Amberkar, M. V., Kumari, M. 2011. *Ocimum sanctum* Linn (Tulsi)-an overview. *Int J Pharm Sci Rev Res*, 7(1):51-53.
- Mondal, S., Mirdha, B. R., Mahapatra, S. C. 2009. The science behind sacredness of Tulsi (*Ocimum sanctum* Linn.). *Indian J Physiol Pharmacol*, 53(4):291-306.
- More, P., Pai, K. 2011. Immunomodulatory effects of *Tinospora cordifolia* (Guduchi) on macrophage activation. *Biology and Medicine*, 3(2):134-140.
- Nair, P. K. R., Rodriguez, S., Ramachandran, R., Alamo, A., Melnick, S. J., Escalon, E., Garcia, P. I., Wnuk, S. F., Ramachandran, C. 2004. Immune stimulating properties of a novel polysaccharide from the medicinal plant *Tinospora cordifolia*. *International Immunopharmacology*, 4(13):1645-1659.
- Nisargandha, M. A., DadaraoParwe, S. 2020. Spread of coronavirus disease 2019 (COVID-19) during the lockdown in the Indian population and preventive measures. *International Journal of Research in Pharmaceutical Sciences*, 11(SPL1):328-332.
- Panche, A. N., Chandra, S., Diwan, A. D. 2019. Multi-Target β -Protease Inhibitors from *Andrographis paniculata*: In Silico and In Vitro Studies. *Plants*, 8(7):231-231.
- Pattanayak, P., Behera, P., Das, D., Panda, S. 2010. *Ocimum sanctum* Linn. A reservoir plant for therapeutic applications: An overview. *Pharmacognosy Reviews*, 4(7):95-95.
- Rastogi, S. 2010. Building bridges between Ayurveda and Modern Science. *International Journal of Ayurveda Research*, 1(1):41-41.
- Rathi, B., Rathi, R., Khobragade, P., Wanadongari, N. M. 2020a. Relevance of Ayurveda Antiviral herbal wisdom from the perspective of current researches. *International Journal of Research in Pharmaceutical*, 11((1)Spl):175-182.
- Rathi, B., Rathi, R., Pusadkar, S. 2019. Contribution of text Rasapaddhati in the history of Indian alchemy: A review. *Journal of Indian System of Medicine*, 7(2):70.
- Rathi, R., Rathi, B., Bhutada, R. S., Dasar, D., Khatana, R. 2020b. Review on Role of Dhoopan in the prevention of airborne infections (COVID-19). *Int. J. Res. Pharm. Sci*, 11(Spl(1)):246-252.
- Rathi, R. B., Rathi, B. J. 2020a. Ayurveda perspectives toward prevention and management of nicotine and alcohol dependence: A review. *Journal of Indian System of Medicine*, 8(1):14.
- Rathi, R. B., Rathi, B. J. 2020b. COVID 19 Pandemic and Preventive Footsteps. *Int J Ayu Pharm Chem*, 12(3):100-106.
- Rege, A., Chowdhary, A. S. 2014. Evaluation of *Ocimum sanctum* and *Tinospora cordifolia* as probable HIV protease inhibitors. *International Journal of Pharmaceutical Sciences Review and Research*, 25(1):315-318.
- Rege, N. N., Thatte, U. M., Dahanukar, S. A. 1999. Adaptogenic properties of six rasayana herbs used in Ayurvedic medicine. *Phytotherapy Research*, 13(4):275-291.
- Sharma, Martins, Kuca, Chaudhary, Kabra, Rao,

- Prajapati 2019. Chyawanprash: A Traditional Indian Bioactive Health Supplement. *Biomolecules*, 9(5):161-161.
- Singh, N., Hoette, Y., Miller, D. R. 2002. *Tulsi: The mother medicine of nature. International Institute of Herbal Medicine.*
- Vetvicka, V., Vetvickova, J. 2011. Immune enhancing effects of WB365, a novel combination of Ashwagandha (*Withania somnifera*) and Maitake (*Grifola frondosa*) extracts. *North American Journal of Medical Sciences*, 3(7):320-324.