



E-ISSN: 2278-4136

P-ISSN: 2349-8234

www.phytojournal.com

JPP 2020; 9(2): 2361-2362

Received: 25-03-2020

Accepted: 10-04-2020

Dr. Pankaj Kushwah

Professor, Thakur
Shivkumarsingh Memorial
Pharmacy College, Burhanpur,
Madhya Pradesh, India

Dr. Nandu Kayande

Professor, Thakur
Shivkumarsingh Memorial
Pharmacy College, Burhanpur,
Madhya Pradesh, India

Bhaskar Mohite

Professor, Thakur
Shivkumarsingh Memorial
Pharmacy College, Burhanpur,
Madhya Pradesh, India

Anubhav Shrivastava

Professor, Thakur
Shivkumarsingh Memorial
Pharmacy College, Burhanpur,
Madhya Pradesh, India

Vinay Mahajan

Professor, Thakur
Shivkumarsingh Memorial
Pharmacy College, Burhanpur,
Madhya Pradesh, India

Nandini Kushwah

Professor, Thakur
Shivkumarsingh Memorial
Pharmacy College, Burhanpur,
Madhya Pradesh, India

Corresponding Author:**Dr. Pankaj Kushwah**

Professor, Thakur
Shivkumarsingh Memorial
Pharmacy College, Burhanpur,
Madhya Pradesh, India

Corona virus (COVID-19): An Ayurvedic approach (Possible role of Tulsi)

Dr. Pankaj Kushwah, Dr. Nandu Kayande, Bhaskar Mohite, Anubhav Shrivastava, Vinay Mahajan and Nandini Kushwah

Abstract

Viral infections play an important role in human diseases, and recent outbreaks in the advent of globalization and ease of travel have underscored their prevention as a critical issue in safeguarding public health. Coronavirus disease COVID-19 is caused by the recently discovered corona virus that can spread between animals and humans. The outbreak of the corona virus was begun in Wuhan, China, in December 2019. The most common symptoms are fever, tiredness, and dry cough. Some individuals also develop aches and pains, nasal congestion, runny nose, sore throat, or diarrhea. It was reported that traditional remedies may alleviate the symptoms of COVID-19. Ayurveda is the world's oldest medical system that can manage any disease without side effects. Tulsi has got the great medicinal value. Tulsi is the effective remedy for the severe acute Respiratory Syndrome. Juice of its leaves gives relief in cold, fever, bronchitis and cough. Drugs acting on microbial agents have been mentioned in Ayurvedic texts as Krimighna Dravyas. *Tulsi*, *Ocimum sanctum* is one of the most important medicinal plants mentioned in Ayurvedic literature for its medicinal and spiritual properties. Tulsi has multi-modal therapeutic effects, we hypothesize that tulsi may be effective in the prevention and management of COVID-19. Though the existing literature supports the management of symptoms of COVID-19 using tulsi, a lack of standard formulation limits its use.

Keywords: COVID-19, *Ocimum sanctum*, Coronavirus

Introduction

Coronavirus disease COVID-19 is caused by the recently discovered corona virus that can spread between animals and humans. The outbreak of the corona virus was begun in Wuhan, China in December 2019. The most common symptoms are fever, tiredness, and dry cough. Some individuals also develop aches and pains, nasal congestion, runny nose, sore throat or diarrhea. It was reported that traditional remedies may alleviate the symptoms of COVID-19 [1].

WHO quotes 'infectious diseases are the sixth leading cause of premature deaths in the world' [2]. Emerging and reemerging infectious diseases continue to impose a constant threat on human population. Among several infectious diseases, viral infections in particular, caused by a range of new and old infectious viruses, challenge survival of mankind on this planet [3].

Literature findings

From literature survey we found substantial number of herbal plants and plant preparations with antiviral potential against different types of viruses. Majority of the antiviral herbs were found containing active components such as flavones, alkaloids and polyphenols, which play an important role against viruses. Based on the extensive search performed, the results are presented under three sections classified as antiviral plants, patent applications and non-patent art [4].

Role of Tulsi in Indian Tradition

The leaves of tulsi are consumable and is being used to normalize the kapha and vata [5]. Tulsi is being used in the management of pain, diarrhea, cough and fever which are the common symptoms of COVID-19 [6]. Tulsi have been used in the management of fever ranging from normal fever to malaria fever [7]. The leaves of tulsi, in addition with cow ghee, were described as the best medicine for pneumonia. There exists a strong scientific evidence for the antiviral effects of Tulsi [5, 6, 7, 8]. Tulsi has been proven to be effective in inhibiting several deadly virus like Newcastle Disease virus, Vaccinia virus and Infectious Bursal Disease virus [9]. Clinical trials conducted earlier in India, where the extract of tulsi leaves was administered for patients with viral hepatitis and encephalitis.

Interestingly there was an increase in the survival and symptomatic improvement in the tulsi group when compared with controls ^[10]. Study proved improvement in respiratory parameters and relief from symptoms of asthma with three days of consumption of tulsi ^[11]. The striking feature in using Tulsi is that it not only restores physiological functions but also restores the psychological functions. Phenolic compounds and antioxidant properties of Tulsi were reported to contribute its therapeutic effects. Tulsi consumption increases the anti-oxidant molecules and enzymes in the body and protects the cells and its membrane from being damaged by the toxic substances ^[12]. Tulsi boosts the immunity of the body and helps to defence the threatening virus and bacteria.⁷ Improvement in humoral and cellular immunity was observed in animal studies after treatment with tulsi oil ^[13]. The possible mechanism for improving immunity is a modulation of the GABA pathway. Due to its multi-modal therapeutic effects, we hypothesize that tulsi may be Effective in the prevention and management of COVID-19. Though the existing literature supports the management of symptoms of COVID-19 using tulsi, a lack of standard formulation limits its use. This is the need of time to start with translational research to provide scientific evidence for the efficacy and to establish the standard formulation of tulsi in the management of COVID-19.

Discussion

There are many therapeutic uses of *O. sanctum* L. (Tulsi) such as to antifungal, antimicrobial, analgesic, anthelmintic, antistress, antifertility, anti-inflammatory, antioxidant, gastro protective, antithyroidic, anticancer and radioprotective. These different medicinal properties of Tulsi help to protect humans in various ways against many dangerous diseases

Conclusion

Herbal treatment can be used for treatment against coronavirus infection as it is the only alternative we are left with for now other than few allopathic medicines suspected to be effective and some life support systems supporting the functioning of lungs and also because of following reasons - Few positive results observed by administering herbal drugs. Unavailability of an allopathic drug. Lack of knowledge of the viral strain. Though the existing literature supports the management of symptoms of COVID-19 using tulsi, a lack of standard formulation limits its use. This is the need of time to start with translational research to provide scientific evidence for the efficacy and to establish the standard formulation of tulsi in the management of COVID-19.

References

1. Covid. Corona virus disease-situation reports. World Health Organization. Situation Reports, 2019, 1-56.
2. <http://www.who.int/mediacentre/factsheets/fs310/en>
3. Howard CR, Fletcher NF. Emerging virus diseases: can we ever expect the unexpected? *Emerging Microbes Infect.* 2012; 1:1-11.
4. <http://www.tkdil.res.in>
5. Singh N, Hoette YRM. Tulsi: The Mother Medicine of Nature, Lucknow. International Institute of Herbal Medicine, 2010, 28-47.
6. Mohan L, Amberkar MV, MK. *Ocimum sanctum* Linn. (TULSI)-an overview. *Int J Pharm Sci Rev Res.* 2011; 7:51-53
7. Mondal S, Varma S, Bamola VD, Naik SN, Mirdha BR, Padhi MM, Mahapatra SC. Double-blinded randomized

- controlled trial for immunomodulatory effects of Tulsi (*Ocimum sanctum* Linn.) leaf extract on healthy volunteers *Journal of Ethnopharmacology.* 2011; 136(3):452-456.
8. Pattanayak P, Behera P, Das D, Panda SK. *Ocimum sanctum* Linn .A reservoir plant for therapeutic applications: An overview. *Pharmacognosy Reviews,* 2010; 4(7):95-105.
9. Prakash P, Gupta N. Therapeutic uses of *Ocimum sanctum* Linn (Tulsi) with anoteon eugenol and its pharmacological actions: a short review. *Indian Journal of Physiology and Pharmacology.* 2005; 49(2):125-131
10. Rajalakshmi S, Sivanandam GVG. Role of Tulsi (*Ocimum sanctum* Linn.) in the management of Manjal Kamalai (viral hepatitis). *Journal of Research in Ayurveda and Siddha.* 1986; 9(3-4):118-123.
11. Sharma G. Anti-asthmatic efficacy of *Ocimum sanctum*. *Sachitra Ayurved* 1983; 35:665-668.
12. Shivananjappa M, Joshi M. Aqueous Extract of Tulsi (*Ocimum sanctum*) Enhances Endogenous Antioxidant Defenses of Human Hepatoma cell line. *Journal of Herbs, Species & Medicinal Plants.* 2012; 18(4):331-348.
13. Vaghasiya J, Datani KNS, NMJ. Comparative Evaluation of Alcoholic and Aqueous Extracts of *Ocimum Sanctum* for Immunomodulatory Activity. *International Journal of Pharmaceutical and Biological Research.* 2010; 1:25-29.