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Role of Common Kitchen Remedies in Prevention of Infectious Diseases with a particular perspective of Covid-19

Kanyaka Bagde¹, Bharat Rathi*², Renu Rathi³, Prem Badwaik⁴, Swapnali Khabde²

¹Department of Rasashastra, Mahatma Gandhi Ayurved College, Hospital & Research Centre, Salod (H), Wardha- 442107, Datta Meghe Institute of Medical Sciences (Deemed to be University), Sawangi (M), Wardha (MS), India

²Department of Rasashastra & Bhaishajya Kalpana, Mahatma Gandhi Ayurveda College, Hospital & Research Centre, Salod (H), Wardha (MS) – 442107, Datta Meghe Institute of Medical Sciences (Deemed to be University), Sawangi (M), Wardha (MS), India

³Department of Kaumarbhritya, Mahatma Gandhi Ayurved College, Hospital & Research Centre, Salod (H), Wardha (MS) – 442107, Datta Meghe Institute of Medical Sciences (Deemed to be University), Sawangi (M), Wardha (MS), India

⁴Department of Swasthavritta, Mahatma Gandhi Ayurved College, Hospital & Research Centre, Salod (H) Wardha (MS) – 442107, Datta Meghe Institute of Medical Sciences (Deemed to be University), Sawangi (M), Wardha (MS), India



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ABSTRACT

The greatness of Ayurveda medicine is that it works on your immune system and helps to build up the body to fight against viral invasions. It is the safest, economical and natural way of self-healing. It can quickly spread among masses from rich to poor all over the country. Ayurveda has been dealing with plenty of herbs for a very long time. These herbs include some rare to prevalent herbs which we can find some in the kitchen even though if that is of any commoners. The concern is that these viral infections are very prone to attack weak immunity and take the chance to affect the country to the globe. So the prevalent herbs of Ayurveda available in the kitchen will always be helpful to get through this viral invasion. These herbs are always there to make tasty food as well as to protect the body from infectious diseases by building the immunity strong. Herbs from the kitchen are not complicated to take as a medicine. Regular use of a few herbs in the straightforward form proves its importance as a medicine. In this article a review of herbs is done which we are available in our kitchen, we are using it in our daily life, and we are getting the benefit of these which a common man might not be fully aware of about.

*Corresponding Author

Name: Bharat Rathi

Phone: 9011058301

Email: bharat.rathi@dmimsu.edu.in

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INTRODUCTION

Novel Corona Virus a newly identified virus has caused a recent outbreak of respiratory illness is called as COVID 19, started in china and now spreading globally in a fast rate and this is mainly the reason for concern and panic across the world. This is not the first time an epidemic has hit and spread. But according to the scientists, the Novel Corona Virus or COVID 19 is a lot different from the SARS (Severe Acute Respiratory Syndrome) that emerged and spread to 26 countries in North Amer-

ica, South America, Europe, and Asia in 2002 and the MERS (Middle East Respiratory Syndrome) which emerged in 2012 (Acter *et al.*, 2020). The new Corona Virus appears to be less deadly than the SARS and MERS which gives a little assurance of course but what has shocked the scientists worldwide is its fast-spreading rate and experts are in no position to judge how it will affect the population further. Only the Preventive measures are needed to be followed and ensured by one and all (Pokhrel *et al.*, 2020). COVID19 recognition starts with very few common symptoms such as common cold, cough, fever, Headache, Body ache etc. NO particular medicine has claimed for the COVID 19 rather than better prevention. Symptomatic treatments are being preferred in lesser risk conditions (Rathi and Rathi, 2020a). So here the Herbs can play a crucial role in abolishing these so common symptoms of Covid 19, not to worsen the symptoms to the severe condition. People are using these culinary herbs, herbal tea and spices like turmeric in their daily life without knowing its health benefits (Rathi *et al.*, 2020b). The spices are giving taste to the food as well as providing the immunity to fight against any invading infections (Khanal *et al.*, 2020). Hence an attempt is made in this article to identify such herbs used in the kitchen with a unique perspective to their immune-boosting activity during covid 19.

Observations & Results

Turmeric (*Curcuma longa*)

Turmeric a golden spice has laden with therapeutic effect on various respiratory disorders. It is having an anti-inflammatory property, its curcumin aids in mitigating the chest congestion that develops in people suffering from an infection of the nose, sinuses, or upper respiratory tract. Volatile oil extracted from turmeric in cough is also expels the phlegm (Prasad and Aggarwal, 2011).

1. Fine powder of roasted turmeric and honey with water drink it twice a day will help to get relief from sour throat and cough.
2. Regular use of herbal tea prepared with turmeric powder and carom seeds with honey gives relief in sore throat.
3. Equal amount of turmeric powder and black pepper powder in half cup of water with few Cinnamon sticks along with honey. Boil the solution for 2-3 minutes and drink daily (Bhowmik *et al.*, 2009).
4. Turmeric is a vital ingredient in Vidangadi lepguti used as an external application in the management of various skin diseases (Dhote *et al.*,

2020).

Garlic (*Allium Sativum*)

Garlic, the most utilizing spice enriched with the organic sulphur and high trace elements which makes it to possess its anti-bacterial, anti-microbial and antioxidant properties (Bongiorno *et al.*, 2008).

1. Crushed garlic consumes directly or with honey, or one can use in cooking also.
2. Consuming crushed garlic with some honey and few drops of clove oil relieve a sore throat.
3. Boil four to five cloves of garlic with a teaspoon of oregano and some honey in a cup of water and drink it after cool down. This remedy is helpful in breathlessness and other cough symptoms.
4. Boil two crushed Garlic cloves in a cup of milk. Boil till $\frac{1}{2}$ cup of milk remains; take in divided dosage in the morning and the evening (Rivlin, 2001).

Ginger (*Zingiber officinale*)

Ginger, the most commonly consuming spice, is being in use for treating respiratory illness since centuries. Ginger bears anti-inflammatory and antiviral properties. It is beneficial in both gastrointestinal and respiratory system. It supports to terminate the congestion developed in the respiratory passages. Gingerol and zingiberene present in ginger help to boost the immune system (Malhotra and Singh, 2003).

1. Boil crushed fresh ginger in a cup of water. Drink this solution 4-5 times a day to get rid of sore throat, cough and even removes congestion fast. For better results, one can add some lemon juice and honey to the above solution.
2. One can chew fresh raw ginger as possible throughout the day to get relief from the Cough (Bode and Dong, 2011).
3. *Ardrak khanda* prepared with fresh ginger and some other drugs used in an autoimmune disorder like urticaria (Chavhan and Rathi, 2019).

Tulsi (*Ocimum sanctum*)

This sacred herb *Tulsi* has multiple therapeutic actions including, anti-microbial, adaptogenic, cardioprotective, anti-inflammatory and immunomodulatory. It is used in multiple ways in treating fever, colds, coughs, backaches, respiratory diseases

and even arthritis. Ayurveda has illustrated multiple uses of Holy Basil in treating several conditions like cough, cold, fever and dryness of throat (Gyawali *et al.*, 2020). *Tulsi* leaves extract is found effective against poliovirus type 3 and Vaccinia virus (Rathi *et al.*, 2020a).

Twak (Cinnamomum zeylanicum)

Cinnamon is also one of the spice uses in the house is considered a remedy for respiratory, digestive disorders. It has anti-inflammatory, aseptic, anti-bacterial and antiviral properties. It supports a healthy heart, healthy respiration ignites the digestive fire and purifies the blood. It can digest toxins.

1. Cinnamon with honey releases cough.
2. Fine powder of cinnamon stick with water relieves fever (Kumar *et al.*, 2019).

Cloves (Syzygium aromaticum)

Cloves are aromatic dried flowers, one of spice commonly known for its pain-relieving property in toothache. Its phenolic compounds such as eugenol and gallic acid are anti-inflammatory and anti-bacterial. Cloves are used to relieve a sore throat and in persistent cough. It acts as a natural expectorant because of essential oil present in it, helps in clearing the respiratory passage. Cloves also help to get rid of the itchy feeling during dry cough.

1. A clove with rock salt and chew it thoroughly to get relief from the soreness and irritation of the throat.
2. You can even burn a clove and crunch it to get relief from a severe cough.
3. Moreover, Clove oil can also be used when mixed with honey, gives an amazing effect from recurring cough (Milind and Deepa, 2011).

Guduchi (Tinospora Cardifolia)

Guduchi also called as Amrita which means the holy thing it gives the immortality. One of the best immune-modulatory drug which is also having the anti-inflammatory, analgesic, antioxidant, anti-allergic, anti-stress and hepatoprotective properties. *Giloy* is a plant commonly available and can be grown in plantations at home.

1. *Guduchi*, *Tulsi*, Ginger & *Krushna Marich* crush them all together and use them to make herbal tea out of it, mixing it with honey relieves cough with fever.

2. Juice or decoction of *Guduchi* may help control cough, fever and support immunity.
3. Ginger and black pepper act like natural antibiotics, antiviral and also as an expectorant to remove the phlegm and clears the congestion (Prajwala *et al.*, 2019).

Nimuka (Citrus limon)

Lemon is enriched with Vitamin C, minerals, flavonoids, phenolic acid and dietary fibre that are essential for average growth and development. Lemon shows anti-inflammatory, ant allergic, antimicrobial, antioxidant and antiviral activities. It has been used for the common cold, fever, and sour throat etc. (Klimek-Szczykutowicz *et al.*, 2020).

1. Lemon juice with coconut oil this mixture used to treat fever, coughs and the common cold.
2. Tea with Lemon juice with ginger for several times in a day about 3-4 cups helps to cure symptoms in COVID-19 (Azam *et al.*, 2020).

Marich (Piper nigrum)

One of the most famous spice from India, also known as King of spice. One of the alkaloids Piperin is the constituent responsible for its sharp smell. Black paper is using commonly to relieve pain, chills, flu, cold, sour throat and fever. It has anti-microbial, antimutagenic, antioxidant and radical scavenging property. It is also the best bioavailability enhancer of other drugs.

1. *Tulasi*, *Twak*, *Marich*, *Ardraka* & *Draksha*, a decoction of all these ingredients are supposed to boost the immunity (Khanal *et al.*, 2020).

Hingu (Ferula asafoetida)

Hingu is a type of gum resin spice uses to flavour the food also as a medicine in India.

It is used as digestive and carminative, but also uses in Asthma, Bronchitis and whooping cough. *Hingu* has antispasmodic, expectorant, laxative and sedative properties.

1. *Hingu* powder whit hot water orally uses in whooping cough.
2. Water extract of the *Hingu* taken orally as a stimulating expectorant (Mahendra and Bisht, 2012).

Tejapatra (Cinnamomum tamala)

Tejapatra is an aromatic spice uses in flavouring food. Its therapeutic potential is due to the presence of alkaloids, triterpenes, cinnamaldehyde, an essential oil which shows antioxidant, anti-inflammatory, immune-modulatory and antiviral effects (Upadhyay, 2017)

1. *Tejapatra* powder and sugar with honey help to cure dry cough, sore throat and cold (Dixit et al., 2013).

Ela (Elettaria cardamomum)

Another important aromatic spice *Ela* called as queen of spice. Its Seeds are rich in volatile oil is the main component and also having phenolic and flavonoid components. *Ela* is using as a digestive, expectorant and stimulant. It seems beneficial in asthma, bronchitis and burning sensation (Sharma et al., 2011).

1. *Ela*, *Twak*, *Vamshalochan*, *Pippali*, sugar with honey this combination helps to cure a common cold, cough also helps to give relief in bronchitis, pneumonia, tuberculosis, viral infection, and in chest congestion (Ram et al., 2012).

Dhanyak (Coriandrum sativum)

Dhanyaka is a regularly usable herb in the Indian food for seasoning. Its seeds are also using as flavouring food along with spices and also as therapeutic uses. It serves micronutrients and nutritional elements. *Dhanyaka* consists of polyphenols and essential oils which are responsible for its particular taste. It shows antioxidant, antimutagenic, anti-anxiety, analgesic and anti-microbial activity (Momin et al., 2012)

1. Coriander seeds powder with water reduce fever and promote a feeling of coolness (Maroufi et al., 2010).

Jirak (Cuminum cyminum)

Jirak is a popular culinary spice having a particular aroma. In traditional medicine, it is used to treat hoarseness of voice, dyspepsia and diarrhoea. Its seeds are used as stomachic, diuretic, carminative, and stimulant. *Jirak* shows anti-microbial, insecticidal, anti-inflammatory, analgesic, antioxidant, bronchodilatory, and immunological activities.

1. A decoction of *Jirak* with honey helps to get relieves the chest congestion in Asthma (Al-Snafi, 2016).

Methi (Trigonella foenum-graecum)

Methi is a green leafy vegetable using as a hot dish in meals and suggested as an essential medicine to treat diseases of digestive and mucosal conditions. The fenugreek seed has traditionally been used as a carminative, analgesic, expectorant, and stomachic agent. It has active components such as flavonoids, polysaccharides, fixed oils and alkaloids. The seeds are also used against diseases like bronchitis, fever, sore throat, influenza, asthma, emphysema, pneumonia, pleurisy, tuberculosis, laryngitis, and sinusitis (Yadav and Baquer, 2014).

1. *Methi* seeds soak in water overnight, and that water extract has to drink in the morning relieves colds, influenza, bronchial complaints, asthma (Snehlata and Payal, 2012).

Madhu (Honey)

Honey is a wonderful gift of nature. Since a very long time, it has been in use as a flavouring agent and a sweetener. Due to its nutritional value and therapeutic use, it has a vital role in traditional medicine. Honey is vitamin-rich also consist of flavonoids and phenolic. Honey is the form of monosaccharide's, fructose and glucose. Also, it has an antioxidant, anti-inflammatory, anti-bacterial and wound healing properties. Only honey at night relieves cough and upper respiratory infection (Meo et al., 2017).

DISCUSSION

The Coronavirus disease of 2019 is called as COVID-19 with severe acute respiratory syndrome caused by the Novel coronavirus Cov2, i.e. new coronavirus. This virus has grown to a pandemic, causing significant mortality throughout the globe.

COVID-19 characteristic varies from asymptomatic or paucisymptomatic forms to respiratory failure that needs mechanical ventilation and support in an ICU, to multiorgan failure and systemic manifestations like sepsis, septic shock, and multiple organ dysfunction. Uncomplicated or mild symptoms may include upper respiratory tract viral infection, including mild fever, cough (dry), sore throat, nasal congestion, malaise, and headache or muscle pain. Also newly recognize the loss of taste and or smell, diarrhoea, nausea and vomiting may be observed without dyspnoea (Casella et al., 2020).

In this article, the drugs which are explained are usually household spices or readily available nearby our house. In Ayurveda also, these drugs are using precisely since a very long time for viral infection symptoms such as common cold, cough, fever,

headache, etc. Their pharmacological activities are well known as a traditional medicine to common people. Chyawanprash is a well known Ayurveda formulation which constitutes most of the kitchen remedies like, *Ela Twak*, *Tejpatra*, *Piper*, Cloves, *Guduchi* and honey used to enhance immunity and stamina (Rathi et al., 2018). Few kitchen drugs are also used for fumigation (*Dhoopan*). It is a process advised in Ayurveda to tackle the airborne infections because of antioxidant, anti-microbial, anti-fungal and antiviral activity of the drugs (Rathi et al., 2020b). Medicated smoke/Dhumpan with kitchen remedies is also successfully advocated as a curative measure of de-addiction in younger age (Rathi and Rathi, 2020b).

Single drug use of above drugs or any formulation of these drugs is used as the alternative medicine in providing the evidence of success that are helping to cure the symptoms of this COVID-19 infections. Few herbal formulations are taking steps forward to evaluate its supportive role in relieving the viral symptoms of COVID-19, along with modern medication. Though they are not considering as total cure, it might be helping to mitigate the early symptoms. Ayurvedic drugs are already said to have immunity-boosting properties too. Its antiviral properties may have been recommended for the coronavirus infection. Not only antiviral property but those drugs are also working on the digestive system to improve its regular functions of the system as well as help to reduce the clinical manifestations like nausea, vomiting, diarrhoea, abdominal pain, etc. These are also a few symptoms newly estimated about the COVID-19. Thus these herbs may help to mitigate the beginning clinical symptoms and standing as a supportive treatment also for those who can afford and convenient to be available and processing too (Chhikara et al., 2020). So before it gets too late one should learn about the household drugs, use it wisely to fight against this COVID-19 menace effectively.

CONCLUSION

The prevention is always better than a cure; in that way, the COVID-19 recommended preventive measures and these so-called herbs which may act as a preventive cum supportive remedies for coronavirus infections. Today is a need of an hour to adapt the survival alternatives too. Even though COVID-19 still has not any total cure, we should not at least disbelief the science that has been followed since a very long time. Ayurveda aims to cure the diseases by using mere herbs and prevention of the health by any disease. It's not a new theory; these herbs are having an analgesic, anti-microbial, immune-

modulatory, antiviral properties. Today's modern era also has studied its properties and has verified its properties on modern parameters. So on that basis considering Ayurvedic and modern point of view the mentioned drugs in this article may help to cure the early or severe stage as a supportive alternative.

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Conflict of Interest

The authors declare that there is no conflict of interest for this study.

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