Preventive Measures to Conquest COVID-19: A Mini-review

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Authors’ contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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ABSTRACT

Ayurveda is the bunch of blooms having multiple spectrums to prevent health and immune to fight with present and future trends of viruses. The principles of Ayurveda make life span extensive and healthy. COVID-19 is the todays crisis situation, world wide people are in dread to respiratory disease symptoms as primary indicators of corona virus. So, Ayurveda literature have the various remedies to strengthening respiratory system with preventive measures like Pranayama, Yoga, Meditation, Good sleep, Diet, Lifestyle and Medication. Prevention is the need of the time to fight with COVID-19 because there is no treatment and vaccines till date.

Keywords: COVID-19; pranayama; yoga; meditation; lifestyle.
1. INTRODUCTION

The prevention is the better that cure is the todays principle followed by worldwide, which is even now mentioned in Indian ancient medicine. There are innumerable slants to think for COVID-19 pandemic. One of the preventive aspects is to make immune respiratory system for cope up the crisis period. As per WHO, Chronic respiratory disease is more likely to develop serious illness [1] and prone to COVID-19 virus. So, it is need to protect respiratory system organs from virus and to robust immune system with short term efforts as there are no specific vaccines or treatments for COVID-19.

2. OUTLINE FOR PREVENTIVE MEASURES

Ayurveda comprising of effective principle to overcome todays pandemic issue. The foremost principle is prolonging life and promote perfect health to human being. The Health is greatly influenced by Life-Style which includes Dinacharya, Ratricharya and Rutucharya. In lockdown period everyone has to modify lifestyle as per guidelines prescribed by the government. But it is very tangential situation for the health workers to work in this situation. The common man as well as people exposing towards pandemic red zone or orange zone areas should take precautionary initiative with prescribed government guidelines. The remedies used for immune respiratory system in short term period are Pranayam, Yogasana, Meditation, Medication, Diet & lifestyle and Sound sleep.

3. Pranayama and Yogasana

Pranayama improves respiratory functions by regularizing respiratory rate, increases in the forced vital capacity, forced expiratory volume, maximum voluntary ventilation, peak expiratory flow rate, and as well prolongation of breath holding time [2].

Within a period of four weeks patients of chronic bronchitis benefited with Yoga and Pranayam therapy [3].

Same results were found in the pilot study of patients of chronic obstructive pulmonary disease (COPD) that pranayama was associated with improved exercise tolerance. Hence Kaminsky suggested Pranayama for symptomatic patients with COPD to get result in twelve weeks [4].

Pranayama and Yoga has a prime role in physical factors like mechanical stimulation and stretching; enable delays in senescence and improves the physiological functions of lung and makes the body elastic [5].

Thus, as finding stated by Abel et.al. that minimum 10 weeks of regular Yoga practice improved pulmonary function. So, less fit individuals suggested to engage them with regular Pranayama [6].

4. MEDITATION

Meditation is very helpful in reducing apparent stress immediately and useful as a short-term mechanism for stressful condition, correspondingly Paudyal et.al said that meditation is beneficial in improving quality life of asthma patients [7]. Similarly, Harinath et.al. suggested three-month Hatha Yoga and Omkar meditation on disturbed cardiorespiratory performance, psychologic profile and for melatonin secretion. There were not significant results observed in systolic blood pressure, diastolic blood pressure, mean arterial pressure, and orthostatic tolerance, but it can be useful in psychophysiology stimuli to increase endogenous secretion of melatonin, which ultimately responsible for improved sense of well-being [8].

In case of COPD population, complex relation was observed in between breathing parameters, emotion, and mindfulness. Meditation is very useful intervention as it has good feasibility and acceptability [9]. Although the physiological and biochemical fluctuations occur during the acute stress response have been well-characterized, there was relaxation response induced with the help of meditation intervention, that may help to tackle the stressful crisis situation like COVID-19 [10].

5. MEDICATION

The curcumin is the very potential component effective in pulmonary diseases and lung disorders, evidence received through in vitro and in vivo studies [11,12]. The Ashwagandha is described as Rasayana (rejuvenator) in Ayurveda and research studies also labelled the same [13].

Ethanol extract of Boswellia serrata found significant effective as anti-inflammatory activity, supporting the treatment in lung disorders with
allergy as well as asthma [14]. Most famous immune modulatory drug in Ayurveda, Chyawanprasha, facilitate current biomarkers of immunity pre and post consumption as well observed beneficial as an adjuvant therapy [15].

In vitro anticancer activity of Abhrak Bhasma on cell line of LungHOP62 shows positive effect at Tata Memorial Centre, Research Education in Cancer, Navi Mumbai [16]. Allergen induced Asthma can be preventatively treated by Kanakasava as traditionally people using since long time [17].

Aqueous extract of Terminalia arjuna prevented pulmonary hypertension as it may work as antioxidant and effective on pulmonary arteriolar wall thickening [18]. E. sonchifolia has properties like anti-tumour, anti-inflammatory and antioxidant activities and significantly effective on pulmonary metastasis which is also justifying conventional use in the traditional medicine [19]. Tinospora cordifolia extract proved its activity as anti-inflammatory and antioxidant activities in asthma, reduces asthmatic inflammation and other lung inflammatory conditions [20]. As per Dybey et.al. Ashtangavaleha and Vyaghreehareetakee Avaleha both are significantly effective with some difference on Tamaka Shwasa (Bronchial Asthma) in children [21].

6. DIET AND LIFESTYLE

The presented data suggest that some food and nutrients, having properties like antioxidant and anti-inflammatory consumed with balanced diet for better pulmonary function, improve lung functioning and reduction of COPD risk [22].

State of malnutrition and weight loss in the crisis of COVID-19 are more prevalent for respiratory disorders due to lack of nourishment. People should be provided with required food material and focused on more energy or protein rich food to overcome the problem that improve the nutritional status [23].

The Mediterranean diet is suggested to improve lung function parameters, which may protect the lung from respiratory dysfunction [24].

7. SOUND SLEEP

Sleep is the restart of human system that helps to improve body functioning and recharging of terminal cells. Disturbed sleep leads to negative health impact on quality of life; which may mediate in between respiratory disorder and quality of life [25].

Similar finding was observed in the study by Wentz et.al. that sleeping less that six hours per night Military recruits more diagnosed with upper respiratory tract infection. So, proper sleep is very most important thing in between the services of COVID-19 [26].

8. RECOMMENDATION FOR AYUSH INITIATIVES

The Ayurveda research in India is at fundamental stage, there is need to develop research attitude in the budding doctors, practitioner to change the reserved culture, and alteration of the leadership to develop Ayurveda globally and to get leadership role in the future healthcare system to defeat crisis like COVID-19 [27].

There are number of areas to be identified for research, education pattern, development of new ideas and collaboration through integrative approach to develop Ayurveda to fight with upcoming crisis situation [28].

Ayurveda is the science of life promotes the concept of biological aging. The panchakarma procedures and other proposed activities are suggested for successful health span like diet and conscious eating, sleep, regular routine, mindfulness activities, Sadrvita [29].

A number of studies were reported from different healthcare disciplines regarding prevention of COVID-19 [30-34].

9. CONCLUSION

COVID-19 is the pandemic situation, whole world is in various crises. The respiratory system related sign and symptoms are the indicative for corona virus. Ayurveda offers number of remedies which are useful for prevention of respiratory diseases and immune the system as well. So, with the help of AYUSH initiatives, all the Ayurveda scholars have the look towards preventive aspect of Ayurveda as life saver mechanism for COVID-19.

CONSENT

It's not applicable.

ETHICAL APPROVAL

It's not applicable.
COMPETING INTERESTS

Authors have declared that no competing interests exist.

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