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## Editorial

### AYUSH for COVID-19 management



The rapidly increasing patients of COVID-19 have overwhelmed the healthcare systems across the world and many countries had come to an almost stand-still. Although most of the infected people have a mild-to-moderate clinical course, and the elderly, the immunocompromised and those with other comorbid conditions land into severe acute respiratory syndrome that has high mortality. As of now, there is no cure for COVID-19 in modern medicine and the treatment is therefore largely supportive and empirical. Although vaccines are being developed, it will take at least another year before they will be available for use. Modern medicine is groping in the dark experimenting with several existing antiviral drugs, which have been used to treat other viral infections in the past, but their efficacy is poor and the adverse effects are serious. The revised national guidelines recommend the empirical use of hydroxychloroquine and azithromycin as frontline therapy for COVID-19 patients [1]. However, the evidence supporting this strategy is weak. The exponentially growing number of papers on COVID-19 management are confusing rather than helping clinicians.

We need effective preventative, promotive, curative and rehabilitative approaches to manage the onslaught of COVID-19. Modern medicine has very little to offer to manage COVID-19 patients. Ayurveda and Yoga, ancient health systems have a lot to offer in this ongoing pandemic of SARS-CoV-2 infection. It will not only bridge the gaps that exist in modern medicine, but will complement modern medicine to reduce the burden of COVID-19.

Ayurveda and Yoga share the philosophy of strengthening the human body and mind and maintaining good health through preventative, promotive, curative and rehabilitative approaches. Integrating these approaches with modern medicine will not only complement each other, but also offer a novel and effective way to manage the current ongoing pandemic of COVID-19. The Government of India has also taken a bold step to initiate this by constituting the 'Interdisciplinary AYUSH Research and Development Task Force' with the objectives of reducing the suffering and deaths associated with COVID-19 in India. The task force has initiated various activities for boosting research and bringing modern medicine and AYUSH systems together to fight this challenge. Concepts and practices of Ayurveda and Yoga cover several dimensions of COVID-19 management.

#### 1. Prophylactic role

Apart from social distancing, hand washing, and wearing a mask, modern medicine does not provide modalities for boosting the immunity and reducing the risk of the infection. The preventive

measures of Ayurveda such as medicated water, gargles, oil pulling and nasal oil administration can be practiced as home-based care and that may offer a 'physiological masks', thereby reducing the risk of catching the SARS-CoV-2 infection [2]. The local interventions form a protective biofilm on the most common site of infection, oral and oropharyngeal mucosa, and may reduce the risk of infection. Health promoting immunomodulator (*Rasayana*) botanicals like *Withania somnifera*, *Tinospora cordifolia*, *Piper longum*, *Glycyrriza glabra* may improve host defense and could be an effective prophylaxis approach against COVID-19.

The care of the most vulnerable group of COVID-19 patients such as those with comorbidities, immunocompromised and older people, is another therapeutic challenge where conventional medicine has limitations. Therapeutic approaches like *Rasayana*, massage, oil pulling can offer effective means of nourishing the tissues, thereby preventing the worsening of the disease and also reducing stress. The health of healthcare workers and those involved in essential services has been a major concern on the background of the rapid transmission of SARS-CoV-2. Doctors, Nurses and Paramedics are working on the field in the war against virus. They are advised hydroxychloroquine chemoprophylaxis, which not only has limited efficacy, but also has known serious side effects. Safe, accessible, affordable, and simple preventive measures of Ayurveda such as medicated water, gargles, oil pulling, nasal administration of oils, and *Rasayana* can be beneficial to healthcare provider this group along with the conventional prophylaxis [2]. Similar approach would be extended to relatives and close contacts of COVID-19 patients.

#### 2. Therapeutic potential

Arresting the progression of COVID-19 once it develops is also an important part of treatment. Ayurveda can offer several herbal formulations and dietary measures having immunomodulator potential that may be useful for post-infection prophylaxis. The clinical presentation of COVID-19 can be asymptomatic, mild, moderate and severe depending on the presence and severity of the symptoms. Apart from using empirical antiviral drugs or immunomodulators such as hydroxychloroquine, modern medicine has very little to offer for the cure of this disease. Ayurveda has several potential drug candidates that can be used as an add-on therapy with the empirical modern medicine therapy in the management of COVID-19. This is an opportune time to take this bold step and explore the tremendous potential that these ayurvedic drugs could potentially offer. This integrative approach can be initiated in several hospitals across the country in a standardized manner under the supervision of a modern medicine experts and Ayurveda experts. This will also help generate the scientific evidence for

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such an approach. There are already more than 50 ongoing studies in India. The Ministry of AYUSH and Council for Scientific and Industrial Research with support from Indian Council of Medical Research has initiated clinical trials for prophylaxis and adjunct treatment with Ayurveda formulations.

### 3. Convalescence and rehabilitation

There is emerging evidence that SARS-CoV-2 has the potential to leave behind a significant amount of pulmonary fibrosis. The patients who recover from COVID-19 disease with some sequelae will need pulmonary rehabilitation with the focus on symptom relief, improving pulmonary function, improving quality of life and reducing stress. Ayurveda and Yoga have a lot to offer in this space through its various exercises and meditation programs. The effects of pandemic will be beyond the number of cases. The economical, psychological, and social effects of disease will be beyond measurement. This is the time we should be practicing Yoga with its true meaning and broader approach. We need to adopt Yoga for community based interventions but following rules of social distancing. This needs innovation in research, education and delivery of Yoga interventions.

### 4. J-AIM platform for collaborative research

The rapidly growing burden on healthcare services across the nation solicit for collaboration and interaction among clinicians of modern medicine and AYUSH systems. India has a unique opportunity to bring modern medicine and AYUSH with all its richness, tradition and experience with the single aim of stopping this ongoing COVID-19 pandemic. The experience with the integrative approach will generate data and research questions, which could be answered through interventional and observational studies, in order to build the evidence-base that is required to develop the science further. The J-AIM is providing a platform for collaborative COVID-19 research. The call for a special issue on COVID-19 is already getting an overwhelming response which will be published next month. It will have a good collection of studies that present several dimensions of AYUSH systems for managing the COVID-19 catastrophe.

The unprecedented global crisis of COVID-19 needs an open mind and a few bold steps for its control. The potential of health wisdom of Ayurveda and Yoga should be actualized in this situation to save lives of millions [3]. This is the time to experience, experiment and present how AYUSH can play an important role in present crisis, especially when world is opening up after the lockdown. Although the challenges of disease are surfacing in newer forms, they can be tackled with an optimistic approach and hard work. Let's begin again with a new spirit following the teachings of Ayurveda and Yoga.

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