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Principles of Jwara Chikitsa (Fever Management) in Aupasargika Rogas (Epidemic Disease) WSR to Covid-19: A case series

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Abstract

Background Methods: Here, stage-wise principles of fever management mentioned in classical Ayurvedic texts based on the guidelines issued by the state government for AYUSH intervention have been applied in mild-to-moderate cases of COVID-19, who had tested positive for SARS-CoV-2 using RT-PCR test and with CT findings of ground glass opacities in lung fields.

Result: After Ayurvedic intervention, these patients responded well symptomatically after informed consent was taken, their RT-PCR test detected negative and remarkable reversal of ground glass opacities in CT scan of lungs were observed. This is evident from the negative RT-PCR tests and CT scans of three patients - two of them showing reversal of ground glass opacities and one showing reversal of consolidation, after exclusive Ayurvedic management.

Conclusion: Adopting "stand-alone Ayurvedic medication" in mild-to-moderate cases of Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2 commonly known as COVID-19) disease in the beginning stage itself controls the infections and simultaneously reverses the pathogenesis, thus preventing further complications.

Keywords: COVID-19, SARS-CoV-2, ground glass opacities, consolidation in lung fields. Aupasargika Roga, Vata Kaphaja Sannipataja Jwara, Jwara Chikitsa Sutra

Introduction

The Ministry of Health and Family Welfare, The Ministry of AYUSH and Government of India have made tremendous efforts in developing National Guidelines and Clinical Management protocols such as Guidelines for self-care and home isolation during COVID-19, Guidelines for AYUSH practitioners for COVID-19. Government of India has also launched the largest COVID-19 vaccination drive in the world. Nevertheless, we are now facing the devastating effect of second wave of COVID-19 status. As per WHO Situation Update Report – 66 [1] dated April 28, 2021. India is reporting highest number of daily cases in the world, almost 50% of new cases reported in the world. India is also reporting fourth highest number of deaths in the world; current case fatality ratio (CFR) is 1.12%.

Owing to the massive increase in the number of cases identified daily, the Public Health System in India is overburdened with paucity of beds, oxygen, ventilators, medicines and other infrastructures. While World Health Organization (WHO) has stated that there is still no evidence to support the benefits of using Remdesvir [2] against COVID-19, we are observing the misuse, overuse and unintended stocking of Remdesvir, creating a panic situation amongst common public, which is a matter of disconcert. WHO has stated that antibiotics should be used only to treat secondary bacterial infection which can be a complication of COVID-19 in severely ill patients and not in primary stage [3]. Also, WHO advises against the use of corticosteroids in the treatment of patients with non-severe COVID-19 and warns about the potential side-effects of the short- and long-term use of corticosteroids that includes Diabetes and Mucormycosis [4]. Initiating Ayurvedic treatment modalities at the beginning stage itself in mild to moderate cases of COVID-19, not only controls the infections immediately, but also helps in preventing disease progress or severity and significant reversal of pathological changes in lung fields. Hence, adopting stand-alone Ayurvedic treatment in mild-to-moderate cases of COVID-19 will be a paradigm shift in management of COVID-19.

Susruta Acharya has mentioned the causes of epidemic diseases and its manifestation in the chapter of Kushta nidana (skin disease) [5].

However, treatment for epidemic diseases is not mentioned in the same shloka. From this, it is comprehended that treatment principles of the respective diseases need to be applied. Based on Ayurvedic perspective, it is considered as kapha vataja or

vatakaphaja jwara depending on patients' condition.

Chikitsa Sutra of Jwara (principles of fever management) was applied as follows

Stage 1	Langhanam with easily digestible food. Pacanam with Tikta Rasa Dravya
Stage 2	Snehapana
Stage 3	Virecanan with Abhayadi Modaka
Stage 4	Rasayana

Stage 1 – Langhanam

Intake of easily digestible food is the first line of treatment mentioned in fever management.

Diet: Yavagu (Rice gruel), Mudga (Green gram soup), non-spicy, non-oily, non-sour food was advised. Drinking Water: Paneeyam with Pushkaramoolam (best drug for hiccup, cardiac and respiratory disorders) [6] was advised. Duration: Till Nirama avastha (signs of proper metabolism like lightness of body, good appetite and thirst, desire for food was attained).

Pacana

Administration of drugs is not advised in first six days of onset of fever. However, Acharya Sushruta advises medicines intake in Fever which is very fast spreading. Tikta Rasa Dravya is advocated irrespective of fever of any aetiology. Medicines:- Bharangyadi Kashaya / Guluchiyadi Kashaya. Preparation: 2 tbsp in 400 ml of water, boil and reduce to 100 ml. Dosage: 10 ml every one hour ten times a day. Sudarsana choorna vati-one tablet divided into 10 everyone and half hour with kashaya. Thaleesadi Chooranam Dosage: 1 pinch every 1 hour 10 times a day with Kashaya. Pushkaramula Chooranam Dosage: 1 tsp in 1 litre of water boil for 5 mins for drinking. Duration: Till symptoms are reduced.

Stage 2 – Snehapana

Intake of medicated ghee to be done when there is less of

kapha.

Medicines: Gugulu Tiktak Grtham or Vidharyadi Grtham. Dosage: 30 ml morning empty stomach as standard dose

Duration: until samyag snigdha lakshanas like hatredness to ghee or appearance of ghee in faeces is seen.

Stage 3 – Virecana (Therapeutic Purgation)

Lina dosha (persisting pathology) may cause complications in future when untreated. This can be compared to the ground glass opacities/consolidation in Covid-19. To avoid this, Virecana is done.

On the previous day of Virecana, advised sour, spicy and oily food. On the day of Virecana, Abhayadi Modaka - 2 tablets empty stomach was given. Post Virecana: Samsarjana karma [7] (diet regime for 3/5/7days)

Stage 4 – Rasayana

For a long-lasting effect and non-recurrence, Rasayana is done.

Drakshadi Kashaya tablet Dosage: 1-1-1 half an hour before food on empty stomach. Agasthya Rasayanam - 1 tsp morning and night after food with warm water. Duration: Around 2 weeks.

Sitopaladi choornam - one tsp three times a day after food with warm water.

Table 2: Case Studies – Patient Information, Symptoms, Intervention and Outcome

Case 1	56/M
Comorbidities	Hypertensive
Symptoms	Fever, Loss of smell & taste
Diagnosis	SARS-CoV-2 Detected
Interventions	Langhanam, Pacanam with Bharangyadi Kashaya, Inhalation with Rasnadi Dhoomavarti
Outcome	Fever reduced on day 1. Recovered loss of smell and taste within 5 days.
Case 2	54/M
Comorbidities	Hypertensive
Symptoms	Loss of smell & taste, Fatigue
Diagnosis	SARS-CoV-2 Detected
Interventions	Langhanam, Pacanam with Guluchiyadi Kashaya, Inhalation with Rasnadi Dhoomavarti
Outcome	Fatigue recovered in 2 days. Recovered loss of taste in 3 days, recovered loss of smell in 6 days.
Case 3	50/M
Comorbidities	-
Symptoms	Fever, Body Pain, Cough, Loss of Smell & Taste
Diagnosis	SARS-CoV-2 Detected
Interventions	Langhanam, Pacanam with Bharangyadi Kashaya, Thaleesadi Vadagam, Sudarsana Vati, Inhalation with Rasnadi Dhoomavarti, Snehapana with Gugulu Tiktak Grtham, Virecana with Abayadi Modak, Rasayana with Drakshadi Kashaya and Agastya Haritaki
Outcome	Fever and body pain reduced in 5 days. Recovered loss of smell and taste after Snehapana.
Case 4	47/F
Comorbidities	-
Symptoms	Fever, Body Pain, Cough, Loss of Smell & Taste
Diagnosis	SARS-CoV-2 Detected
Interventions	Langhanam, Pacanam with Bharangyadi Kashaya, Thaleesadi Vadagam, Sudarsana Vati, Inhalation with Rasnadi Dhoomavarti, Snehapana with Gugulu Tiktak Grtham, Virecana with Abayadi Modak, Rasayana with Drakshadi Kashaya and Agastya Haritaki

Outcome	Fever and body pain reduced in 5-6 days. Recovered loss of smell and taste during Snehapana.
Case 5	50/F
Comorbidities	-
Symptoms	Fever, Body Pain, Loss of Smell & Taste
Diagnosis	SARS-CoV-2 Detected
Interventions	Langhanam, Paneeyam with Pushkaramoolam throughout the treatment, Pacanam with Bharangyadi Kashaya, Thalesadi Vadagam, Sudarsana Vati, Inhalation with Rasnadi Dhoomavarti, Snehapana with Gugulu Tiktak Grtham, Virecana with Abayadi Modak, Rasayana with Drakshadi Kashaya and Agastya Haritaki
Outcome	Fever and body pain reduced in 3-4 days. Recovered loss of smell and taste in 5 days. GGO reversed after 3 weeks.
Case 6	40/F
Comorbidities	Hypertensive
Symptoms	Fever, Body Pain, Loss of Smell & Taste
Diagnosis	SARS-CoV-2 Detected, GGO in CT Scan
Interventions	Langhanam, Paneeyam with Pushkaramoolam throughout the treatment, Pacanam with Bharangyadi Kashaya, Thalesadi Vadagam, Sudarsana Vati, Inhalation with Rasnadi Dhoomavarti, Snehapana with Vidarayadi Grtham, Virecana with Abayadi Modak, Rasayana with Drakshadi Kashaya and Agastya Haritaki
Outcome	Fever and body pain reduced in 3-4 days. Recovered loss of smell and taste during Snehapana. GGO reversed after 3 weeks.
Case 7	30/M
Comorbidities	-
Symptoms	Fever, Body Pain, Cough, Cold, Loss of Smell & Taste
Diagnosis	SARS-CoV-2 Detected, Consolidation and GGO in CT Scan
Interventions	Langhanam, Paneeyam with Pushkaramoolam throughout the treatment, Pacanam with Bharangyadi Kashaya, Thalesadi Vadagam, Sudarsana Vati, Inhalation with Rasnadi Dhoomavarti, Snehapana with Gugulu Tiktak Grtham, Virecana with Abayadi Modak, Rasayana with Drakshadi Kashaya and Agastya Haritaki
Outcome	Fever and body pain reduced in 7 days. Recovered loss of smell and taste after Snehapana. GGO and consolidation reversed after 4 weeks.
Case 8	26/F
Comorbidities	-
Symptoms	Fever, Body Pain, Cough, Loss of Smell & Taste
Diagnosis	SARS-CoV-2 Detected
Interventions	Langhanam, Paneeyam with Pushkaramoolam throughout the treatment, Pacanam with Bharangyadi Kashaya, Thalesadi Vadagam, Sudarsana Vati, Inhalation with Rasnadi Dhoomavarti, Snehapana with Vidarayadi Grtham, Virecana with Abayadi Modak, Rasayana with Drakshadi Kashaya and Agastya Haritaki
Outcome	Fever and body pain reduced in 5 days. Recovered loss of smell and taste during Snehapana.
Case 9	26/M
Comorbidities	-
Symptoms	Fever, Running Nose, Loss of Smell & Taste
Diagnosis	SARS-CoV-2 Detected
Interventions	Langhanam, Paneeyam with Pushkaramoolam throughout the treatment, Pacanam with Bharangyadi Kashaya, Thalesadi Vadagam, Sudarsana Vati, Inhalation with Rasnadi Dhoomavarti, Snehapana with Vidarayadi Grtham, Virecana with Abayadi Modak, Rasayana with Drakshadi Kashaya and Agastya Haritaki
Outcome	Fever reduced in 1 day. Recovered from running nose, loss of smell and taste, in 3 days.

Discussion

Based on the guidelines issued by the state government for AYUSH intervention by initiating Langhana and Pacana itself, ama lakshanas (signs of infection and inflammation) like loss of smell and taste were easily reduced, this is not an easily attainable outcome in modern system of medicine. Giving Virecana and Rasayana (immune modulatory drugs) helped reversal of ground glass opacity (GGO) and consolidation in lung fields, which if untreated could have led to serious complications in future in reduced immune conditions.

Patients were treated under home isolation, which reduced the strain on the Public Health System. Cost of medicines per patient was highly economical. Anti-asthmatic property of Bharangyadi Kashaya [8] has been studied. Anti-inflammatory property of Gugulu Tiktaka Grtham [9] acting against cytokine storm has been studied. Anti-asthmatic effect of Agasthya Rasayana [10] has been studied. Patients were treated at home quarantine as there was lack of IP facility. So remote monitoring of patients was highly challenging. Nearly 113 cases were treated with stand-alone Ayurvedic treatment but RT-PCR after treatment was not done considering economic

burden of the patients and also because government has announced that post treatment RT-PCR is not necessary

Conclusion

The COVID-19 pandemic has had far-reaching consequences beyond the spread of the disease itself and efforts to quarantine it, including economic, cultural, social, psychological and educational implications. CSIR has warned that a third wave would precipitate a far more dangerous situation than the challenge the country had faced so far. This study shows that Ayurvedic treatment when administered at the early detection of mild-to-moderate COVID-19 cases will be a pragmatic choice to help the country face the pandemic crisis.

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