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Clinical Study in the Management of Post Covid Syndrome

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Abstract

As the world is facing crisis due to COVID-19 pandemic, there is one more big challenge to face is Post Covid Complications, which can also be termed as Post Covid Syndrome. The symptoms are almost same, as seen after every chronic fever, but in aggravated forms. At present there is no specific treatment for modern science as it is the condition which includes multi organ involvement and something to relate with immunity. In the present scenario, Ayurveda must not remain silent to rationalize its therapeutic approach. Need of the hour is to understand it in terms of Ayurveda principles and develop an Ayurveda treatment protocol to combat such patients. In Ayurveda the condition

can be understood in terms of *Vata Prakopa* as a manifestation of *dhatu kshaya* and *Avarna*. The best treatment which can be advised is *Rasayana* and *Yoga*. Keeping in mind the above factors two *rasayan* drugs with different formulation were chosen for study in Post Covid patients. All the patients were also advised to practice *Pranayam (Suryabhedhi Kumbhak)*.

During the study it was found that *Pranayam* and *Vardhman Pippali Rasayan* showed the significant results in the management of Post Covid Syndrome or in other terms post *Sannipataj Jwara* complications.

Keywords: Vardhman Pippali Rasayan, Post Covid Syndrome, Ashwagandha Pak, Covid

Introduction

As we know that most people with COVID-19 get better within weeks of illness, some people experience post-COVID conditions such as fatigue, recurrent fever, headache etc. Post-COVID conditions ^[1] are a wide range of new, returning, or ongoing health problems people can experience more than four weeks after first being infected with the virus that causes COVID-19.

Even people who did not have symptoms when they were infected can have post-COVID conditions. These conditions can have different types and combinations of health problems for different lengths of time.

Sometimes it may include multi organ system and may lead to autoimmune disorders with further complications. It is unknown how long multi organ system effects might last and whether the effects could lead to chronic health conditions ^[2].

As the cases are increasing day by day due to post disease complications and there is no specific treatment in modern science, there is need to understand these conditions according to Ayurveda fundamentals. At this juncture incorporation of Ayurvedic regimen in the treatment may be a hope-finding solution and requires appreciation with scientific reasoning ^[3]. Better understanding and clinical trials will help to develop Ayurveda treatment protocol for such conditions. As per the Ayurveda fundamentals Post Covid symptoms can be correlated with *Dhatu kshaya* and *Avarana*.

Keeping in mind all these factors, this study was carried out in GS Ayurveda Medical College and Hospital in Post Covid Syndrome patients with Ayurveda interventions. So for this clinical trial a separate case paper was designed to study Post Covid complications in our area and two *Rasayan* formulations were chosen for study. As there was need for the Ayurveda protocol which has multidimensional approach, *Ashwagandha Pak* ^[4] with *Pranayam* in one group and *Vardhman Pippali Rasayan* ^[5] with *Pranayam* in another group, was chosen for intervention.

Aims & Objectives

- To understand Post Covid Syndrome according to Ayurveda.
- To assess the efficacy of *Pranayam & Vardhman Pippali Rasayan* in management of Post Covid Symptoms.
- To assess the efficacy of *Pranayam & Ashwagandha Pak* in the management of Post Covid Symptoms

Materials and methods

Patients

Patients of Post Covid Syndrome fulfilling the criteria according to proforma were selected irrespective to their age, sex, occupation, religion etc. from O.P.D. of GS Ayurveda Medical College And Hospital, Pilkhuwa.

Drugs

Drugs i.e. *Pippali Churna*, *Ashwagandha Pak* were prepared in GS Ayurved Pharmacy according to standardized norms.

Management

All the patients were advised to perform *Pranayam (Suryabhedhi Kumbhak)* [6] exercises for 19 days.

All the patients were divided into two groups of 20 each.

Group A: Vardhman Pippali Rasayan + Pranayam (*Suryabhedhi Kumbhak*)

Group B: Ashwagandha Pak 5gm BD + Pranayam (*Suryabhedhi Kumbhak*)

Duration of treatment

The patients were administered the trial drugs prepared according to Ayurveda classics for following duration after *Kostha Suddhi*

- *Vardhamana Pippali Rasayana* for 19 days.
- *Ashwagandha Pak* 5 gm BD for 19 days.
- *Suryabhedhi Kumbhak* 10 min Empty Stomach for 19 days

Diet

The patients of both groups were advised to take routine light and soft diet.

Follow up

The patients of both groups were advised to visit the O.P.D. of Kayachikitsa or discuss on online every 5th day for 20 days.

Criteria For Selection

Post Covid Patients with following most common symptoms:

1. Neurologic symptoms-- Headache / Loss of taste &Smell/Sleep Disturbance
2. Psychiatric Symptoms --Depression/anxiety/Difficulty thinking or concentrating/,

3. Muscular symptoms--Tiredness or Fatigue/joint pain/muscle pain,
4. Respiratory & cardiac Symptoms--mild cough/Shortness of breath/chest pain,
5. GIT symptoms -- constipation/loose motions/abdominal pain

Inclusive Criteria

1. Patients with negative RT-PCR reports for Covid -19
2. Patients of either sex
3. Pre Diagnosed patients of post covid syndrome.
4. Patients above 20 yrs of age and below 50 yrs of age.

Exclusion Criteria

Patients with other major pathologies or major systemic disorders i.e. D.M., T.B. etc. were excluded from this study. For inclusion and exclusion a detailed Proforma-containing chief complaints, associated symptoms detailed history, *Ashta vidha Dasha Vidha Pariksha* and other routine physical examination-was prepared for each patients before and after treatment carefully.

Criteria for Assessment

Main signs and symptoms, associated complaints were given different scores according to their severity, they were recorded before and after treatment.

During follow up study, if relapse take place, the severity of main signs and symptoms were recorded after relapse.

Results of therapies were assessed on the basis of comparison of scores recorded before treatment, after treatment and after relapse (if occurs).

Scoring Pattern

Following scores were given to signs and symptoms.

- | | | |
|---|---|-------------------------------|
| 0 | = | No |
| 1 | = | Mild |
| 2 | = | Moderate |
| 3 | = | Severe |
| 4 | = | Unbearable disturbing routine |

Effect of Ashwagandha Pak on 18 patients (2 drop out patients)

Table 1

Sign /Symptom	n	Mean			Relief %	S.D. ±	S.E. ±	t	P
		B.T.	A.T.	BT-AT					
Neurologic Symptoms	17	3.71	1.59	2.12	57.14	0.76	0.18	11.52	<0.001
Psychiatric symptoms	14	1.93	1.14	0.79	40.93	0.55	0.15	5.27	<0.01
Muscular Symptoms	15	1.73	0.93	.8	46.24	0.65	0.17	4.79	<0.01
GIT Symptoms	17	2.88	2	0.88	30.56	0.68	0.16	5.38	<0.01
Respiratory & Cardiac	17	3.12	1.71	1.41	45.19	0.6	0.15	9.37	<0.001

Effect of Vardhman Pippali Rasayan Therapy on 17 patients (3 drop out)

Table 2

Sign /Symptom	n	Mean			Relief %	S.D. ±	S.E. ±	t	P
		B.T.	A.T.	BT-AT					
Neurologic Symptoms	17	3.67	0.33	3.33	90.74	0.67	0.22	15	<0.001
Psychiatric symptoms	14	1.57	0.14	1.43	91.08	0.90	0.34	4.18	<0.01
Muscular Symptoms	15	1.71	0.43	1.29	75.44	0.45	0.17	7.53	<0.001
GIT Symptoms	17	2.78	0.22	2.56	92.09	0.83	0.28	9.22	<0.001
Respiratory & Cardiac	17	3	0.56	2.44	81.33	0.69	0.23	10.71	<0.001

All the above results were statistically highly significant.

Overall effect of Vardhman pippali rasayan therapy

Table 3

Result	No. of patients	%
Cured	9	50
Markedly improved	0	0
Moderately improved	6	35.2
Mildly improved	2	11.76
Unchanged	0	0

This table shows that 50% patients were observed having complete cure. While moderate improvement was observed in 35.2% patients and mild improvement was observed in 11.76% of patients.

Discussion

According to Covid-19 can be correlated with *Vata kapha pradhan Sannipataj Jwara* [8] and Post Covid complications are the manifestations of *Vata prakopa*. According to classics *Vata Vyadhi* can be manifested either due to *Dhatu kshaya* or *Avarana*. [9].

Dhatu Kshaya

Due to the abnormal *chaya upchaya* in chronic *sannipataj jwara*, *dhatu kshaya* takes place, and as a result all *Sapta Dhatus* are lost up to some extent. Ultimately, deterioration of immunity (*Ojakshaya*) is evident due to *dhatu kshaya*. Whenever *Dhatvagni* diminishes production of next *Dhatu* may be affected. During this process, some metabolic wastes are produced which are known as *Dhatumala* and which are responsible for *srotoavrodh*.

In Ayurveda, some *Dhatu Pushti Nyaya siddhant* has been described in a very beautiful way. These *siddhantas* are *Khale Kapota Nyaya*, *Ksheera Dadhi Nyaya*, *Kedara Kulya Nyaya* and *Ek Kala Dhatu Pushti Nyaya*. During *poshan prakriya* from *Rasa* to *Shukra Dhatu*, *Dhatvagni* of respective *Dhatu* substantially divide to essential elements into three fractions, that is, *Sukshma*, *Sthula* and *Mala Bhaga*. All *Dhatus* get nutrition by the use of *dravyas* having *samanya* properties to respective *dhatu*s and they get reduced by the use of those having *viruddha* properties. Similarly, *Samanya* which is responsible for the increase of *Dhatus* is related to both the attributes *Gunas* and the *Jati* of substances [10].

AVARANA

When *Dosha* or *Dhatu* obstructs a particular *Dosha* then, it will give rise to increased signs and symptoms related to the function of that particular *Dosha* or *Dhatu* which has obstructed [11, 12]. Concepts of *Avarana* plays an integral part in understanding the *Samprapti* of many diseases [13]. The treatment of *Avarana* should aim towards cleaning the *Srotas* with *aushadh dravya* which possess *An-abhishyandhi*, *Snigdha*, *Kapha Pitta Aviruddham* and *Vata anulomana* properties [14]. *Rasayana Chikitsa* plays an integral role in the management of *Avarana samprapti*. *Rasayana dravyas* are commonly used to improve health and longevity by balancing between *Tridosha*, *Saptadhatu* and *Trimala*.

Rasayana Chikitsa

Rasayana is made up of two words *ras+ayan*. Here 'Ras' means 'ras dhatu' or nutrition elements and 'ayan' means channel. Therefore *Rasayan* helps in opening the channels for nutrition of *sapta dhatu*. The specific actions of *Rasayana dravyas* in the *Poshaka Rasa* level (nutrition level), *Agni* level (metabolic appreciation) and *Srotas* level

(tissue nourishment) are well acceptable [15].

According to research most of the *Rasayana dravyas* have shown immune-modulatory activity to boost up or restore functional immunity in response to defense mechanism [16]. The *Rasayana dravyas* have also shown tissue and disease specific immune-modulatory activity [17]. These *Rasayana dravyas* not only play a role in immunity but also exhibits its anti-stress, inotropic and antioxidant activity which helps in increasing and maintaining quality-of-life.

Rasayan treatment in post Covid syndrome

Covid-19 is *Vatkapha pradhan Sannipatik jwara* and Post Covid complications include *srotoavrodh*, *pitta dusti*, *vata prakop* and *dhatu kshay* as already has been discussed.

The treatment should include *aampachak*, *srotoshodhak*, *vata shamak* and *dhatu poshan*. These all effects can be achieved with the help of *rasayan*. 'Rasayana' is having the property to correct 'Rasa-Rakta Daurbalya' and as a result *uttarotar dhatu* gets nourishment.

That's why two *Rasayana dravyas* and their most effective formulations were chosen for study which are *kapha shamak srotoshodhak & dhatu poshak*. i.e. *Vardhman Pippali Rasayan* and *Ashwagandha Rasayana*. Adjuvant to this the patient was asked to practice *Pranayama* specifically *Suryabhedhi kumbhak* [6] as mentioned in *Hath Yog Pradipika* 2/48, which is known to have capability to cure 80 *vata rogas* by regular practice. *Pranayam* has already been proved to give strength to *pranvaha srotas*, which is most affected in COVID-19 disease.

Probable Mode of Action of Ashwagandha Rasayan

Ashwagandha [18] is a real potent regenerative tonic (*Rasayana* of Ayurveda), due to its multiple pharmacological actions like anti-stress, neuro protective, antitumor, anti-arthritis, analgesic and anti-inflammatory etc. It is useful for different types of diseases like Parkinson, dementia, memory loss, stress induced diseases, malignoma and others.

Rasa (Taste) - *Tikta* (Bitter); *Katu* (Pungent); *Madhura* (Sweet)

Guna (Characteristics)- *Laghu* (Light); *Snigdha* (Unctuous) *Veerya* (Potency)- *Ushna* (Warm) *Vipaka* (Post digestion effect)- *Madhura* (Sweet)

Probable mode of action of Vardhmana Pippali Rasayana

Pippali is one of the *Rasayana* drugs described in Ayurveda. It has *Agnidipana* and *Amapachana* actions and is helpful in the alleviation of *Ama* from the body. *Pippali* alleviates *Ama*, the factor responsible for *Bala bhrmsa* or development of autoimmune disorders in the body, resulting in the correction in immune system activities. *Pippali* has *Rasayana* and *immune-modulator* actions. As per text *Pippali* is *Rasayana* [19]. which acts on *Agni* level and nourish the malnourished *Dhatu* [20]. Due to its *Tikshna*, *Laghu guna* property [21]. it acts as *Srotoshudhikar*. *Katu* rasa present in *Pippali* acts on *kapha dosha* causing *deepan*, *pachan*, increases the *Agni* and appetite which remain decreased in patient. Thus, *Vardhman Pippali Rasayana* having three-way action on Post Covid Syndrome.

Conclusion

Both the *Rasayan kalp* with regular practice of *Pranayam* showed good effect in the management of *Post Covid Syndrome*. The results of *Vardhman Pippali Rasayana* was found to be more promising than *Ashwagandha Kalp*.

References

1. <https://www.nhs.uk/conditions/coronavirus-covid-19/long-term-effects-of-coronavirus-long-covid/>
2. <https://www.cdc.gov/coronavirus/2019-ncov/long-term-effects.html>
3. Geneva: WHO. General Guidelines for Methodologies on Research and Evolution of Traditional Medicine. (WHO QOL), 2000, p. 59.
4. Ayurveda sarsangrah, Avleh pak prakaran, shree baidyanath ayurved bhavan limited, Jhansi, edition, 2008, pp529
5. Brahmanand Tripathi, Charak Samhita Uttarardh, Chikitsasthana Rasayanadhyay 1/3/40, chaukhambha subharti prakashan ,Varanasi, revised edition 2006, 50.
6. Kashinath Samgandhi, Jagriti Sharma, Swasthwritt Sudha, Astang Yog. Ayurveda Sanskrit hindi pustak bhandar, jaipur, edition, 2019, 216.
7. https://www.who.int/docs/default-source/coronaviruse/risk-comms-updates/update54_clinical_long_term_effects.pdf?sfvrsn=3e63eee5_
8. Akhila VG. Management of *Sannipata Jwara* w.s.r to COVID-19 – Case report, J Ayurveda Integr Med. 2021 Mar 6 (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7936553/>)
9. Vaidya Jadavji Trikamji Acharya. editor. 1st ed. Varanasi: Chaukhambha Sanskrit Sansthan; 2001. Agnivesha, Charaka, Dridhabala, Charaka Samhita, Chikitsa Sthana, Vatashodhita Chikitsa Adhyaya, 28/59. 619
10. 1st ed. Varanasi: Chaukhambha Sanskrit Sansthan; 2001. Chakrapanidatta, Commentator. Charaka Samhita, Sharira Sthana, Shareeravichaya Shareeram Adhyaya, 6/9-10; pp. 330-1.
11. 1st ed. Varanasi: Chaukhambha Sanskrit Sansthan; 2001. Chakrapanidatta, Commentator. Charaka Samhita, Chikitsa Sthana, Vatashodhita Chikitsa Adhyaya, 28/217-219. 626.
12. Vaidya Jadavji Trikamji Acharya. editor. 1st ed. Varanasi: Chaukhambha Sanskrit Sansthan; 2001. Agnivesha, Charaka, Dridhabala, Charaka samhita, Chikitsa Sthana, Panduroga Chikitsa Adhyaya, 16/124-7. 532.
13. Praveen BS. Clinical approach to Avarana. Int J Res Ayu Pharm. 2012; 3:765-8.
14. Ibidem, Charaka samhita, Chikitsa Sthana, Vatashodhita Chikitsa Adhyaya. 28/238-40. 627.
15. Gautam KD, Debnath PK. *Proceeding*. New Delhi: Published by CCRAS; 2001. Stress adaptation in Ayurveda by immunomodulatory *Rasayana* in National Seminar on *Rasayana*; pp. 60-75.
16. Bhattacharya SK, Goel RK, Kaur R, Ghosal S. Anti-stress activity of sitoindoles VII, VIII, new steryl glycosides from *Withania Somnifera*. *Phytother Res*. 1987; 1:32-3.
17. Debnath PK, Mitra A, Hazra J, Pandit S, Biswas TK, Jana U, et al. Evidence based medicine-A clinical experiences on ayurveda medicine. In: Ray A, Gulati K, editors. *Recent Advances in Herbal Drug Research and Therapy*. New Delhi: IK, International Publishing House Pvt. Ltd; 2010, 49-73.
18. Narendra Singh, Mohit Bhalla, Prashanti de Jager,* and Marilena Gilca An Overview on Ashwagandha: A Rasayana (Rejuvenator) of Ayurveda, doi: 10.4314/ajtcam.v8i5S.9. Epub, 2011, 3.
19. Charak Samhita. Vidyotini Hindi Commentry by Shastri, K. Chaturvedi, G.N Chaukhambha Bharati Academy Varanasi, 2003.
20. Sharma PV. Chaukhamba Sanskrita Bharti, Nama Rupa Gyanam 1st edition, 2002.
21. Sharma PV. Chaukhambha Bharti Academy, Varanasi, Dravya Guna Vijnana. Vol. II, reprint, 2003.