

Case series

Effectiveness of Siddha formulations for Sars CoV2 variants infection at home isolation in Chennai, Tamil Nadu - A case seriesS.M. Chitra¹, P. Mallika², N. Anbu¹¹Department of PG Maruthuvam, Government Siddha Medical College, Arumbakkam, Chennai, 106, Tamil Nadu, India²Aringnar Anna Government Hospital of Indian Medicine, Arumbakkam, Chennai, 106, Tamil Nadu, India

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ABSTRACT

As Sars CoV 2 infection was accountable for present global pandemic, many novel therapies and traditional medicines have been implied by various countries for the management and prevention of the spread. From the beginning, Corona virus mutation is also progressing with different variants. Delta variant was the most dreadful and contagious one, among the variants, which hospitalized more people. Now, Omicron is the new variant of concern announced by WHO in November 2021 which makes the disease more transmissible. In India, as the cases started rising from January 2022 by this new variant, various measures had been taken for the management of the disease. Traditional Siddha formulations were given for cases reported with positive Covid 19 infection, in home setting, at Chennai and the reports were shared here. Despite, genome sequencing is the precise diagnostic tool for variants detection, the cases reported here were in close possibility of omicron and mixed variants. *Maha vasantha kusumakaram* tablet a shastric higher order metallic preparation was proven to be effective with herbal preparations *Thippili rasayanam*, *adathodai kudineer* and *Amukkara choornam*. The patients recovered in a short span of time and the repeat Real time polymerase chain reaction (RTPCR) tested negative within 10 days. This was highly encouraging that Siddha medicines were proven to be effective in different variants of mutated Covid virus with no adverse effects and the medicines proved to be safe and effective by post- test of liver and renal parameters.

Keywords: Sars CoV 2; variants; Siddha medicines; *maha vasantha kusumakaram* tablet; RTPCR.**INTRODUCTION**

Novel coronavirus is responsible for 2019-20 pandemic which has been first identified at Hubei province, central China in Wuhan. During Covid-19 pandemic, the SARS-CoV-2 coronavirus, has mutated into different form of variants. The emerging variants has been classified either as a variant of concern (VOC) or a Variant of Interest (VOI) by The World Health Organization. The variant of concern encompasses the Alpha, Beta, Gamma, and Delta variants while under the Variants of Interest the Eta, Iota, Kappa, and Lambda were encircled. As per World Health Organization, a Variant of Concern was responsible for a rise in fatality, increase in transmission, and a substantial decrease in effectiveness of vaccines whereas Variant of Interest variant had a genetic capability that influence the attributes of the virus like transmission, severity of the disease, immune and diagnostic escape. The world health body stated that a VOI was mainly responsible for a greater part of the community transmission (1). Among the variants, Delta (B.1.617.2) identified foremost in India, causes more infections and spreads faster than other variants (2). The above was considered as the most contagious form of the SARS-CoV-2 coronavirus by September 2021.

On November 11, 2021, in Botswana the new variant (B.1.1.529) was initially detected in the specimens

collected. The Omicron variant was first reported to the World Health Organization (WHO) on November ,2021 by South Africa. Under the guidance of WHO's Technical Advisory Group on Virus Evolution (TAG-VE), WHO labelled B.1.1.529 a variant of concern, as Omicron, on 26 November 2021 (3). The World Health Organization warned that, the new coronavirus variant would cause severe consequences with increase in fatality which makes Covid-19 more transmissible (4). In India the RTPCR test focuses on E, N and Rd Rp genes and if a person got infected with any one of these, it was considered positive for Covid. According to World Health Organization statement, the S gene is not seen in the Omicron variant. The above is a marker to identify the variant, that results due to multiple mutations of the variant. The S-gene target failure (SGTF) or S-Gene dropout is another indicator to establish whether one is infected with Omicron variant. However, genome sequencing was the only way to detect if a person who has Covid-19 contracted it from the Omicron variant (5,6). India reported 1,16,836 new Covid-19 cases, on January 6, 2022. As per the data released by the health bulletins of States and Union Territories, it was the highest in 200 days, that took India's caseload to 3,52,25,699. In a single day, 495 Omicron cases were recorded and the total number of infections of the new Omicron variant detected raised to 2,630, stated by Union Health Ministry data. Of the accumulated cases, Maharashtra stood first with 797, second Delhi

465, followed by Rajasthan 236, Kerala 280, Karnataka 226, Gujarat 204, and Tamil Nadu 121(7). In the above circumstances, as the cases started to surge, in January 2022, RTPCR (qualitative) test confirmed cases were treated with Siddha medicines *Maha vasantha kusumakaram* tablet, *Thippili Rasayanam*, *Adathodai kudineer* and *Amukkara choornam* in home setting at Chennai, and its efficacy were recorded (8,9). Diet restrictions and regimen were advised.

Case presentation

Informed consent

Since this is a case report study, informed consent was obtained from all the cases for disclosing their reports and publications without revealing their identity.

Case 1

The patient was a male aged 66 years working as an accountant in a private sector and a resident of Chennai. He was medium built with height 160cm and weight 61kg. The patient reported at OPD, Aringnar Anna Government Hospital for Indian Medicine, Arumbakkam, Chennai on 3rd January 2022, presented with elevated temperature, headache, rhinitis, cough, body ache, tiredness, and loss of appetite with comorbid condition of hypertension. On interrogation, he mentioned that the above symptoms were for past 2 days, and he was tested for dengue antigen test with suspicion as his neighbor was affected with dengue fever and it was negative. As he had taken two doses of the covid vaccination (covaxin) one in March 2021 and another in April 2021, he confidently believed that he might not have been Covid infected and thus came on his own interest to take Siddha medicine for fever. He was advised to take RT-PCR test on the same day and he tested positive. He was self-quarantined in his home and was treated with Siddha medicines. Through telephone conversation his vital parameters and symptoms were recorded daily, and

treatment was given accordingly. The patient himself recorded and reported the vitals. Timeline of symptoms, vital parameters, investigations, and treatment are listed in Table 1. His hypertension medication Losartan one tablet daily was continued during Siddha management of Covid 19.

Case 2

A male aged 57 years working as a regional sales manager in Chennai contacted the physician through phone on 8th January that he tested positive for Covid. On enquiry, he mentioned that he got infected through close contact by his family member and isolated himself at home despite Covid vaccinations (covaxin) taken in March and April 2021. He had high temperature, cough, body pain, headache, and loss of taste with comorbid condition of hypothyroidism for past 12 years. The siddha medicines were prescribed over phone with diet and regimen by the physician and was asked to check the vitals and report his condition daily. The instructions were given to him appropriately and the tablet levothyroxin 50 mg for hypothyroid condition was continued.

Case 3

A 54 years' old female, wife of case 2 tested covid positive working in the administrative department of government sector had fever, cough, rhinitis, headache, body ache and loss of taste. Due to close contact with her husband, she got infected even though she was vaccinated twice for Covid in March and April 2021. She was also taking treatment for hypothyroidism for the past 20 years and taking levothyroxine 50 mg daily. She was prescribed Siddha medicines by the physician and her vitals and symptoms were recorded daily through phone. The timeline of symptoms, vital parameters recorded, investigations and treatment followed are listed in Table 1 for all the three cases.

Table1: Timeline of symptoms, vital parameters, investigations given and treatment of cases

Date/ Day	Symptoms, vital parameters, investigations	Medicine
Case 1		
4/1/22 / Day 1	Cough, running nose, difficulty in breathing, headache, body ache, loss of appetite, tiredness present. Temperature 100 F, BP 150/92, spo2- 96, pulse rate – 98. RTPCR tested positive CBC, CRP, d-dimer, interleukin -6, CT chest were given at ICMR approved lab, Nungambakkam, Chennai.	Tab. Paracetamol 1 tds <i>Maha vasantha kusumakaram</i> tablet 1 bd <i>Thippili Rasayanam</i> 5g bd <i>Adathodai kudineer</i> 30 ml tds
5/1/22 / Day 2	Runny nose, headache decreased, difficulty in breathing, cough, body ache, loss of appetite tiredness continued, Temperature 99.5, BP 145/90, spo2- 98, pulse rate - 89	Same medicine continued
6/1/22 / Day 3	Breathing difficulty, headache, runny nose relieved, cough decreased, body ache, tiredness present. Temperature 98.9, BP 133/83, spo2- 98, pulse rate - 86	Same medicine
7/1/22 / Day 4	Mild cough, tiredness present, appetite slightly increased. Temperature 98.6F, BP 127/82, spo2- 97, pulse rate - 85	Paracetamol discontinued. Other medicines continued.
8/1/22 / Day 5	Cough reduced; appetite improved. Body ache present. Temperature 97 F, BP 131/78, spo2- 98, pulse rate - 90	Same medicine

9/1/22/ Day 6	No cough, tiredness present. Temperature 98 F, BP 120/74, spo2- 98, pulse rate - 92	Same medicine
10/1/22/ Day 7	Appetite normal tiredness present, Temperature 97.4 F, BP 125/76, spo2- 98, pulse rate -89	Same medicine continued
11/1/22/ Day 8	Tiredness present. Temperature 97.8 F, BP 126/80, spo2- 99, pulse rate - 92	Same medicine continued
12/1/22/ Day 9	Symptoms reduced. Temperature 97.3 F BP 115/76, spo2- 99, pulse rate - 83, RTPCR repeat test given. CBC, CRP, d-dimer, interleukin-6, liver, and renal parameters electrolytes were given for testing.	<i>Amukkara choornam</i> 2g bd <i>Thippili Rasayanam</i> 5g bd <i>Adathodai kudineer</i> 30ml bd
13/1/22/ Day 10	Patient felt normal. Temperature 96.8 F, BP 114/74, spo2- 99, pulse rate - 81, RTPCR tested negative	Same medicine
14/1/22 – 17/1/22 Day 11- 14	CBC, CRP, d-dimer, interleukin-6, liver, and renal parameters electrolytes were given for testing on 21/1/22.	Same medicine
Case 2		
8/1/22/ Day 1	Fever, Headache, Body Pain, Cough, Loss of taste. Temp 102, spo2-99, pulse rate- 102. RTPCR tested positive, CBC, CRP, d-dimer, interleukin-6 were done at ICMR approved lab, Chennai.	Tab.Paracetamol 1 tds <i>Maha vasantha kusumakaram</i> tablet 1bd <i>Thippili Rasayanam</i> 5g bd <i>Adathodai kudineer</i> 30 ml tds
9/1/22 / Day 2	Fever, body pain, headache, cough, loss of taste present. Temperature- 100.1, spo2-99, pulse rate -100	Same Medicine
10/1/22/ Day 3	Fever, body pain, cough, loss of taste, headache, present. Temperature - 99.4, spo2-96, pulse rate-95	Same Medicine
11.1.22 Day 4	Fever, body pain and headache reduced, cough reduced. Temperature -98.6, spo2 98, pulse rate -94	Paracetamol discontinued. Other medicines continued.
12/1/22/ Day 5	Cough reduced; loss of taste partially recovered. Temperature -98.2, spo2 -99, pulse rate -92.	Same Medicine
13/1/22/ Day 6	Taste recovered. Temperature - 98.1, spo2 - 99, pulse rate -96,	Same Medicine
14/1/22 / Day 7	All symptoms reduced. Temperature -98.3, spo2 -99, pulse rate- 97, repeat RTPCR given.	Same Medicine
15/1/22 - 21/1/22 Day 8 - 14	RTPCR tested negative on 15 th . CBC and other investigations were given on 18th January 2022.	<i>Amukkara choornam</i> 2g bd <i>Thippili Rasayanam</i> 5g bd <i>Adathodai kudineer</i> 30ml bd
Case 3		
8/1/22/ Day 1	Fever, rhinitis, Cough, Loss of taste, Headache, Body Pain present. Temp 100, spo2-97, pulse rate- 101. Rtpcr tested positive, CBC, CRP, d-dimer, interleukin-6 were done at ICMR approved lab, Chennai	Tab.Paracetamol 1 tds <i>Maha vasantha kusumakaram</i> tablet 1bd <i>Thippili Rasayanam</i> 5g bd <i>Adathodai kudineer</i> 30 ml tds
9/1/22 / Day 2	Fever, body pain, headache, cough, loss of taste present. Temperature- 99.1, spo2-99, pulse rate -100	Same medicine
10/1/22/ Day 3	No fever and headache. body pain, cough, loss of taste present. Temperature - 98.4, spo2-98, pulse rate-98	Except paracetamol other medicines continued.
11/1/22 - 14/1/22 Day 4-7	Cough reduced on day 5 and loss of taste recovered on day 6 while body pain reduced on day 7. Temperature, spo2 and pulse rate were recorded normal. Repeat RTPCR given.	Same medicine
15/1/22 - 21/1/22 Day 8 - 14	RTPCR tested negative on 15 th . CBC and other investigations were given on 18 th January 2022.	<i>Amukkara choornam</i> 2g bd <i>Thippili Rasayanam</i> 5g bd <i>Adathodai kudineer</i> 30ml bd

Siddha interpretation

In Siddha literature *suram* was classified into 64 types as per *Yugi muni* (10). As per text, the symptoms described in *Iya suram* were high fever, cough, bronchitis, difficulty in breathing, loss of taste, diarrhea that may lead to fatal condition if not treated properly (11). The described *Iya suram* symptoms were close to symptoms present in covid19. Hence, based on Siddha pathology of *Thiri thodam* principle

(Vali, Azhal, Iyam) the medicines were selected to alleviate the vitiated *Iya thodam* which is predominant in covid 19. *Maha vasantha kusumaram* tablet is a metal/mineral *shastric* preparation described in Siddha formulary of India indicated for *Iya* diseases, fever, cough, bronchitis. *Thippili rasayanam*, *Adathodai kudineer* were also indicated for fever and respiratory problems whereas *Amukkara choornam* was an anti- viral and immunomodulator (12). All the above medicines were in use for decades and were

widely available in all Siddha pharmaceuticals. The medicines were purchased by the patients' family members from a Private Siddha pharmacy.

As per Siddha principle, diet was considered important in fever conditions (10). While taking higher order metal preparations, to enhance the bioavailability of the medicine and its excretion, diet is considered important, and it should be taken as per physician's recommendation. Mostly rice porridge, steamed rice flour made foods (idly, idiyappam) would be advised for the patients during that period which are easily digestible (10). Hence, the patient was advised to take *Maha vasantha kusumakaram* tablet, one tablet twice a day for 7 days with diet restriction and after that discontinued as the patient's symptoms relieved.

Rationale for selection of Siddha medicines

The predominant symptoms of Covid 19 infection are high temperature, cough, breathing difficulty which can lead to fatal condition and hence, *Maha vasantha kusumakaram* tablet was selected as a primary drug of choice which is indicated for the above symptoms described in Siddha text [ie fever, *Iya noigal*, *Erumal* (cough), *Eraippirumal* (bronchitis)] and in particular to counteract lung infections (12). Moreover metal/mineral combination drugs would be effective in accelerating the speedy recovery of the patients. *Thippili rasayanam* a polyherbal formulation has an anti-inflammatory, anti-septic, anti-spasmodic and immunomodulator properties with action against respiratory pathogens that could mitigate the lung infections rapidly (13-15). In Covid d-dimer may be raised due to bleeding tendency and consequent clot formation. *Adathodai kudineer* was selected to halt the above bleeding tendencies (16). CRP and interleukin-6 are biomarkers for cytokine inflammatory conditions which are also elevated in relation to disease progression and therefore, *Amukkara*

choornam was selected as an anti-inflammatory and immunomodulator to act in the above conditions (12).

Therapeutic intervention

Therapeutic intervention consisted of Siddha medicines, diet, and regimen. Details of them given for 1-7 and 8-14 days were listed in Table 2.

Investigations

The investigations of the cases were listed on Table 3, for case 1, the patient was tested as positive for covid 19, on the first day and negative on the 9th day when the symptoms reduced. Even though, RTPCR was negative on 9th day, C - Reactive protein was not under normal limit. Hence, the medicines were continued for 14 days. Repeat test was once again done on 18th day i.e., 21/1/22 which showed all the parameters including CRP were in normal limit. CT Chest showed patchy areas of ground glass densities with sub-segmental collapse, consolidation in basal segments of both lower lobes with 20% consolidation on 1st day which came to 2% with resolved stage on 18th day. For case 2 and case 3, repeat RTPCR tested negative within a week in the 6th day itself and other parameters returned to normal in the 10th day. However, to ascertain the safety profile of the tablet *Maha vasantha kusumakaram* and other medicines administered, Liver and renal parameters were tested for all the 3 cases.

Outcome

The symptoms started to subside quickly within 5 days. The tiredness was the only symptom which persisted for a week. The patient adhered to our instructions strictly. There was no disease progression and adverse events reported. The patients were followed up for a month and it was confirmed that they had no health issues.

Table 2: List of therapeutic intervention, diet, and regimen

Therapeutic intervention	Days 1-7	Days 8-14
Medicines	<i>Maha vasantha kusumakaram</i> tablet 1 bd <i>Thippili Rasayanam</i> 5g bd <i>Adathodai kudineer</i> 30 ml tds	<i>Amukkara choornam</i> 2g bd <i>Thippili Rasayanam</i> 5g bd <i>Adathodai kudineer</i> 30ml bd
Diet	Advised to take rice porridge, idly, idiyappam, warm water and to avoid cold, oil, and spicy foods.	Restricted to cold, and very spicy foods. Minimal oil and spicy foods can be taken.
Regimen	Steam inhalation, saltwater gargling, 2 times a day, <i>Pranayamam</i> 5-10 minutes	<i>Pranayamam</i> 10-15 minutes

Table 3: Results of investigation parameters of the cases

Investigations	1 st day of treatment 4.1.22	9 th day / 12.1.2022	18 th day 21.1.2022
Case 1			
RTPCR	Positive CT value ORF 24 N24	Negative	
Blood			
Total RBC count (mill/cu.mm)	4.64	4.43	4.40
Total WBC Count (cells/cu.mm)	6800	6100	5500
Absolute Neutrophil (cells/cu.mm)	5100	4270	3630
Absolute Lymphocytes (cells/cu.mm)	1020	1281	1320
Absolute Monocytes (cells/cu.mm)	612	366	440
Absolute Eosinophils (cells/cu.mm)	68	122	110
Absolute Basophils (cells/cu.mm)	0	61	0
Platelets (10 ³ /μl)	217	387	308
Hemoglobin (g/dl)	13.1	12.8	12.6
C Reactive Protein (mg/L)	27.87	5.00	2.09
D-Dimer (μg/ml (FEW)	0.18	0.46	0.30
Interleukin-6 (pg/ml)	29.6	-----	3.69
Liver function test			
Bilirubin –Total (mg/dl)	0.12	0.54	0.57
Bilirubin –Direct (mg/dl)	0.07	0.23	0.22
Bilirubin –Indirect (mg/dl)	0.35	0.31	0.35
SGOT (U/l)	22	54	30
SGPT (U/l)	14.2	49	22
Alkaline phosphatase (U/l)	44.4	74	72
Gamma GT (U/l)	42	28	19
Total Proteins (g/dl)		7.63	7.29
Albumin (g/dl)		4.16	3.95
Globulin (g/dl)		3.47	3.34
A/G ratio		1.2	1.18
Renal function Test			
Serum urea (mg/dl)	12.7	19.90	22.04
Creatinine (mg/dl)	0.71	0.87	0.77
eGFR (ml/min/1.73 m ²)	---	>90	>90
Electrolytes			
Sodium (mmol/L)	138.1	137	136
Potassium (mmol/L)	3.92	5.1	4.68
Chlorides (mmol/L)	106.5	99	100
Bicarbonate (mmol/L)	25.1	29	26.6
CT Chest	20% lung involvement	----	2% lung involvement
Case 2			
Investigations	8.1.22	13.1.22	
RTPCR	Positive CT value ORF 1b 23.92 N gene 24.28, S Gene 20.45	Negative	
Investigations	10.1.22	18.1.22	
Blood			
Total RBC count (10 ⁶ /μl)	5.42	5.3	
Total WBC Count (10 ³ /μl)	4.73	6.8	
Absolute Neutrophil (10 ³ /μl)	2.29	3.41	
Absolute Lymphocytes (10 ³ /μl)	2.07	2.73	
Absolute Monocytes (10 ³ /μl)	0.34	0.34	
Absolute Eosinophils (10 ³ /μl)	0.01	0.29	
Absolute Basophils (10 ³ /μl)	0.01	0.01	
Platelets (10 ³ /μl)	194	286	
Hemoglobin (g/dl)	15.8	15.4	
C Reactive Protein (mg/L)	9.6	2.54	
D-Dimer (μg/ml (FEW)	0.2	<0.1	
Interleukin-6 (pg/ml)	<2.7	<2.7	

Liver function test		
SGOT (U/l)		23.1
SGPT (U/l)		30.7
Gamma GT (U/l)		28.8
Renal function Test		
Creatinine (mg/dl)		0.81
eGFR (ml/min/1.73 m ²)		100
Case 3		
Investigation	8.1.22	13.1.22
RTPCR	Positive CT value ORF_lg 24.49 N gene 23.88, S Gene 21.98	Negative
Investigation	10.1.22	18.1.22
Blood		
Total RBC count (10 ⁶ /μl)	3.92	4.0
Total WBC Count (10 ³ /μl)	7.07	8.4
Absolute Neutrophil (10 ³ /μl)	3.42	4.71
Absolute Lymphocytes (10 ³ /μl)	3.22	3.12
Absolute Monocytes (10 ³ /μl)	0.17	0.3
Absolute Eosinophils(10 ³ /μl)	0.23	0.29
Absolute Basophils (10 ³ /μl)	0.01	0.01
Platelets (10 ³ /μl)	226	265
Hemoglobin (g/dl)	12.6	12.6
C Reactive Protein(mg/L)	6.9	4.54
D-Dimer (μg/ml (FEW)	0.1	<0.1
Interleukin-6 (pg/ml)	<2.7	<2.7
Liver function test		
SGOT (U/l)		27.6
SGPT (U/l)		25.4
Gamma GT (U/l)		31.7
Renal function Test		
Creatinine (mg/dl)		0.52
eGFR (ml/min/1.73 m ²)		108

RTPCR – Real time polymerase chain reaction, RBC – Red blood cells, WBC – White blood cells, SGOT- Serum glutamic oxaloacetate transaminase, SGPT – Serum glutamic pyruvic transaminase, Gamma GT – Gamma glutamyl transaminase, GFR – Glomerular filtration rate.

DISCUSSION

There were some proven trials with Siddha medicine as add on therapy in the treatment of Covid 19 (17). A similar case study was done with mercurial preparation of Siddha drug *Vajrakandi mathirai* proved effective given with modern medicine (18). Metal mineral preparations is a part of Siddha system of Medicine used for the treatment of chronic and major ailments like cancer since decades (19, 20). In this regard, Siddha medicines with metal/ mineral preparation may be competent for covid 19 treatment with comorbid conditions in minimizing the duration of illness. So, the above case was decided to treat with such combination. The patients were given *Maha vasantha kusumaram* tablet, a metal/ mineral combination drug as a primary drug which was mainly indicated for fever, *Iya noigal* and respiratory problems to overcome the illness within a short span of time and without disease progression. Investigations were done before, in-between and after treatment to note whether there were any abnormal changes present.

RTPCR quantitative test of case 1 revealed CT value as ORF 24 and N gene 24. There was no S gene detected. In case 2 and case 3, RTPCR CT value was ORF lb 23.92, 24.49, N gene 24.28, 23.88 and S gene 20.45, 20.45 respectively in which S gene was detected. Hence, case 1 has a greater possibility for Omicron variant infection and case 2 and case 3 has a possibility of delta or a mixed variant infection. Anyway, genome sequencing is the only confirmatory diagnostic tool for the variant detection of Covid. As it will take time to do genome sequencing, irrespective of the variants the treatment is the foremost measure to proceed with a patient.

Despite RTPCR tested negative within a short period on 9th day for case 1 and 6th day for case 2 and case 3, CRP was not in normal range for case 1 and so a retest was done to confirm the same in the 18th day. The safety profile of the Metal mineral combination drug *Maha vasantha kusumakaram* was evident in the liver and renal functions test. Despite the patient's age being above 53 years and presented with comorbid conditions, Siddha treatment did not lead to any adverse events.

Limitations

All the patients had taken two doses of Covid vaccination. Tab. Paracetamol was given for all the patients with Siddha medicines for hyperthermia. Chest CT was not done for case 2 and case 3 as they had no breathing difficulty. Liver, renal and electrolytes investigations were not done for case 2 and case 3 before treatment.

Strength

This study gives insight to the fact that metal/ mineral combination of Siddha medicines can be given with physician's guidance in the treatment of Covid 19 which was proven to be safe and effective.

CONCLUSION

The present study concluded that Siddha medicines with herbal, metal, mineral preparations can be used for the treatment of different variants of Covid 19. Yet this must be proved with larger sample size and RCT trials. Repurposing already existing drugs in traditional system of medicine for novel diseases like covid19 should be encouraged and time tested in future.

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CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

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