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Case report

Persian Medicine for the Treatment of Severe COVID-19: a Case Report

Running Title: Persian Medicine and COVID-19 Treatment

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Abstract

COVID-19 treatment is still essential especially manage patients suffering from severe conditions. Many pharmaceutical drugs like Hydroxychloroquine, Oseltamivir, and others were introduced for curing these patients, but further, than their efficacy, some side effects might be seen. Some patients might not respond to these drugs, and their condition did not heal. This study described a 78-year-old man who suffered from severe COVID-19. His first complication in the first two days was progressive persistent dry cough and Sore throat, and on the third-day fever, chills, weakness, lethargy, and severe loss of appetite. He did not properly respond to chemical drugs, and his condition did not get better. improving the condition Finally, he was treated with Persian Medicine (Iranian traditional medicine; ITM) prescription. The advice of the Persian Medicine (PM) specialist was to contain pomegranate paste, almonds, wheat semolina soup, cooked quince, and pineapple. After two weeks and a month of follow-up, he did not show any complications. According to the data from the treatment period and changing the patient's signs and symptoms, the probable potency of PM for treating COVID-19 alone or as a supplementary prescription could be concluded. Based on the review of the literatures about the efficacy of various traditional medicine, it could be concluded that further studies are necessary to prove the efficacy of PM for COVID-19 and other viral infections. Also, the importance of patient follow-up and frequent visits should be observing patients' condition to control and revise the advice.

Keywords: Hydroxychloroquine, Herbal Medicine, Iranian Traditional Medicine, Oseltamivir, SARS-COV-2.

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Introduction

Covid-19 as a burden disease started in Wuhan, China, in December 2019 (1). According to the WHO, COVID-19 dashboard, 469,212,705 COVID-19 confirmed cases (6,077,252 deaths) had been reported up to 17 March 2022 (2). SARS-COV-2, an agent that causes COVID-19 disease, could transmit from environmental surfaces, respiratory droplets, direct contact, fecal-oral, and bodily fluids. The indicated sign and symptoms of COVID-19 are fever (92.8%), cough (69.8%), dyspnea (34.5%), myalgia (27.7%), pharyngalgia (17.4%), headache (7.2%), diarrhea (6.1%), sore throat (5.1%), and rhinorrhea (4%) (3). Furthermore, some psychiatric and neuropsychological impacts like depression, anxiety, sleep disruption, fatigue, and post-traumatic stress were noted (4).

Efficacy of many chemical drugs indicated for treating patients suffering from COVID-19. Some of these are Remdesivir, Azithromycin (5), Hydroxychloroquine (HCQ), Bromhexine, anti-TNF-α, anti-IL6, and inhaled corticosteroids (6). Although these drugs might save and cure patients, some reports are available showing treatment failure, and there are some controversies. For instance, the usefulness of HCQ alone or in combination with Azithromycin (AZ) was indicated in some studies; however, others did not indicate HCQ as a definite remedy preferred other medicine because of its side effects (7-10). In addition, Remdesivir was also shown to have some side effects like bradycardia (11).

According to the lack of responses besides the probable side effects in some patients, an alternative or supplementary treatment to reduce the treatment duration and decrease probable side effects seems necessary. In this paper, a case of covid-19 who did not respond to pharmaceutical drugs and was treated with Persian Medicine was introduced.

Case presentation

A 78-year-old man, with a medical history of diabetes mellitus, benign prostate hypertrophy, and mild hypertension besides taking Metformin, Glibenclamide, Tamsulosin, Pantoprazole, Ranitidine, Methoral, Valsartan, and Amlodipine, referred to Shahid Sadoughi Hospital, Yazd, Iran. He suffered from progressive persistent dry cough and Sore throat in the first two days and then fever and chills, weakness, lethargy, and severe loss of appetite on the third day. According to the computed tomography (CT) scan evidence, he was recommended to be hospitalized, but due to dissatisfaction, he received an outpatient treatment of (oral) Oseltamivir and HCQ. The next day, he returned to the hospital with a bad general condition and was hospitalized and received Oseltamivir, Meropenem, Levofloxacin (Tavanex), and pantoprazole in the morning, daily metoprolol, vitamin C, gliclazide, and AZ.

Appetite loss based on the visual analog scale (VAS) was 10/10 in the few first administer days, but it ameliorated after some days and became 6-7/10. During the hospital stay, his defecation was diarrhea.

On March 12, after hospitalization for 12 days, the patient was discharged with personal satisfaction from the hospital with a percentage of oxygen saturation of about 87% with O2 NASAL MASK personal consent. Nevertheless, the

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infectious disease specialist advised him to refer to the Persian Medicine (PM) specialist because of not improve the patient's general condition during the hospitalization period.

Initial vital signs were: blood pressure, 130/80 mmHg; Initial laboratory data revealed a leukocyte count of 7x109/liter, lymphoid cells 40%, neutrophils 40%, platelet count 100000/mm3, and fasting blood sugar 130. Observations on CT scans also showed a more severe conflict than the initial CT scan.

During the first visit to PM doctor, the patient had weakness, lethargy, shortness of breath, cough, constipation, and loss of appetite; therefore, the following instructions were prescribed:

1) A spoon of pomegranate paste in the middle of the meal

2) 5 Almonds before the meal

3) Wheat semolina soup: one cup of wheat semolina soup (250 ml) should be taken beside lunch and dinner meals. At first, it should be taken, and then, the main meal taken by observing the regimen. Foods should be chewed even if they were in the form of soup.

The wheat semolina soup instruction (for four people):

six cups of water, 1 cup of wheat semolina (Bulgur), one onion (Allium cepa), one carrot (Dacus carrota), salt, and turmeric; after being well cooked, two tablespoons of sesame oil or 25-gram butter, three tablespoons of fresh or dried chopped parsley (Petroselinum crispum), three tablespoons of fresh or dried chopped dill (Anethum graveolens dhi), fresh sour lemon or lemon juice.

4) Exercise to the extent of gentle movements of the upper limbs in the same sitting position alone or with the help of the patient.

He still had dyspnea about 8/10 (VAS), weakness, and lethargy about 9/10 (VAS), and he could not even sit on the bed. The level of decreased appetite was 6/10 (VAS) and he did not defecate for three days ago.

Table 1. Patient's data on the Persian Medicine treatment period

Date	Existent Symptoms/ Signs	Consumed foods and drugs from the previous day	Laboratory tests	Further explanations	Recommendations
March 13 (after about 38 hours)	Headache Neck pain Defecated once (black) weakness and lethargy 5/10	Appetite improved	Lymphocytes 21% (19% Dec. from initial) C-reaction protein (CPR) Inc.	no dyspnea at rest breath shortness in walking and activity	Break 5 jujubes and put them in boiling water for 10 min and drink the extract every 8h (for 2 days)
March14		wheat semolina soup (once) almonds (every 8h) sweet pomegranate paste (once)		no thirst no nasal congestion no chest pain no fever no chills urine volume Inc. but thicker	use the soup and sweet pomegranate paste frequently
March 15	oxygen saturation 85%	almonds, soup, and pomegranate		satisfaction with the treatment was	A spoon sweet Pomegranate Paste every 3h

	(without nasal oxygen) lethargy and weakness about 8/10 (VAS) constantly lying down and coughing with activity paleness and felt pressure in the stomach a feeling of heat in the body sweating	paste pantoprazole in the morning, daily metoprolol, vitamin C, gliclazide, and AZ		7/10 (VAS) No fever	A slice of cooked quince (*Cydonia oblonga*) every 1.5 h fatty foods, cream, watermelon, lentils, curd, and barley were eliminated
March 18	breath shortness and coughed with activity a little.			good general condition normal defecation	
March 20	coughing (4/10 (VAS)) breath shortness with activity (2/10 (VAS)) fatigue chest and neck pain on the left side (once last night)	pickles and broth and used turkey and chicken (2-3 times. Probably Cinnamon sticks, ginger, and cardamom (several times)			1 ring pineapple compote (in the middle of each meal) **Do not consume:** bread (too much) Dough Omitting the egg white broth (contains legumes) Pickles, Cinnamon sticks, ginger, and cardamom (not at all)
March 24	Bitterness in mouth Dryness and stickiness in the throat frequent urination (existed from the previous time)			Nasal oxygen usage Dec.	advice to eat pineapple for 2 days was again recommended and be followed closely (because he did not pay attention to the advice)
March 25	cough in activity about 2/10 (VAS)			good symptoms and general condition oxygen saturation 94% (without nasal oxygen)	

Inc. = increased, Dec. =decreased, h= hour(s), min= minute(s)

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After March 25, he was followed for two weeks and a month later. Again, the patient did not report any symptoms.

Based on the patient's son, who is also a doctor, about his father's treatment:

my father had a fever, chills, and cough, and after four days, he was hospitalized because of breath shortness and CT scan signs. He was hospitalized in Shahid Sadoughi Hospital for ten days and took pharmaceutical medicine. His condition worsened in the middle of treatment, and he had a fever, appetite loss, and breath shortness. While he was discharged, he still had a fever, loss of appetite, fatigue, and breath shortness, and used oxygen capsules. Fortunately, after observing Iranian traditional medicine (ITM) advice and diet, he became better as time goes on.

Discussion

In this case report, a 78-year-old man suffering from COVID-19 was described. He was first treated using Oseltamivir and HCQ as an outpatient, but owing to his bad condition, the next day, he returned, was hospitalized, and prescribed Oseltamivir, Meropenem, Levofloxacin (tavanex®), and pantoprazole in the morning, daily metoprolol, vitamin C, gliclazide, and AZ. After 12 days of hospitalization, because of not proper curing, he was visited by the PM specialist. He had been prescribed to take pomegranate paste, almonds, wheat semolina soup, and gentle movements for exercising. Moreover, by further visits and follow up some other advice like eating pineapple and so on, all the advice or forbidden foods are indicated in Table 1. Overall, following the patient for two weeks and a month later, he did not report any symptoms.

In previous case reports, PM showed to might be helpful in the treatment of COVID-19 patients. Chinese traditional medicine (CTM) was reported to cure COVID-19. In one study combination of different decoctions like Gegen + Xiaochaihu, Chaihu + Sanren Decoction, XiaoChaiHu + MaXingShiGan, XiaoChaiHu + MaXingShiGan + Xiaoxianxiong, Mahuanglianqiaochixiaodou was shown to be helpful. Like our report, some vacillation in changing better patient conditions could see. It could be deduced that follow-up of the patients using traditional medicines should be observed fussily. Reverse our case, which was treated with ITM, was treated with CTM (12).

In another treatment case with CTM, Mahuang Jiazhu and Buzhong Yiqi Decoctions were used in two cases. Like the previous study and our case changing and observing signs and symptoms of vacillation, managing the patient's condition by changing the dose, and adding or omitting some components of Decoctions seemed necessary. Furthermore, it might be helpful to pay attention to the chemical drugs taken besides traditional combinations or decoctions (13). In another case of COVID-19, treatment with CTM showed to cure and reduce pulmonary fibrosis (14). Other evidence to prove the efficacy of CTM for COVID-19 cases is also available (15). CTM enema therapy for intestinal involvement, but not respiratory, could be helpful (16). Huashibaidu is another indicted efficient treatment for mild COVID-19 compared to conventional treatments (17).

Ayurveda treatment was recommended in some cases. When combined with Yoga, it was shown to be effective for patients with multiple comorbidities due to COVID-19 (18). Ayurveda could be helpful for symptomatic recovery, deaths, and comorbidity management (5). Moreover, Arogya Kashayam combined with Western Medicine was efficient in COVID-19 patients when used alone (19). Using Ayurveda treatment might be helpful for patients with mild to severe COVID-19 (20).

In some studies, traditional and Western medicine used together for curing COVID-19 were reported cases. For example, in three studies, CTM and Western Medicine combination's efficacy was shown. So if the reality of these remedies were approved in further studies, a sufficient and safe treatment procedure could be found, especially for those who believed in traditional and herbal medicines or who did not accept traditional medicine alone (21-23). Another study indicated the efficiency of combined therapy with Yoga, Acupressure, Hot foot immersion, Jala Neti, Kapalbhati, *Ocimum tenuiflorum*, peppermint, and eucalyptus oil in addition to Metronidazole, Fexofenadine, and AZ (24). Jinhua Qinggan and granules in addition to Western Medicine remission of clinical symptoms such as fever and poor appetite in COVID-19 patients (25). Similar clinical manifestations related to respiratory system improvement for Arbidol and Shufeng Jiedu Capsule were seen (22).

Conclusion

Traditional medicine might be a proper treatment approach alone or in a combination of pharmaceutical treatments. However, further case-control, interventional, and also more case reports need to magnify the real impact of these treatment procedures in the treatment of COVID-19. Furthermore, Iranian traditional medicine recommendation needs more attention and should compare with other traditional approaches.

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