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Case Study

Treatment of T-AYU-HM Premium and Onion Steam Vaporisation on Possible Reinfection or Reactivation Covid-19 Patient: A Case Study

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ABSTRACT

During the coronavirus pandemic, we are at stage where now observations are being recorded for possibilities of reinfection or reactivation in patients suffered from coronavirus. The heterogeneous natures of coronavirus infection producing complications in patients require a lot of critical care and monitoring. Post-discharge from hospitals, proper self-care and immune booster supplements have become a must. Patient's self-immunity, post-discharge medication non-adherence, casual approaches in self-care might become reasons for reinfection or reactivation of the virus in patients. Reporting case studies on reinfection or reactivation of coronavirus help enhance post-discharge management and safety guidelines. A 50-year-old male infected with coronavirus was admitted to the hospital, receiving treatment and discharge after 10 days. A 2 months later due to difficulty breathing, coughing, and fever he presented to our clinic. On examination and laboratory investigation, it was considered possible reinfection or reactivation of coronavirus in a patient. With proper discussion and prior consent we initiate treatment with T-AYU-HM premium and onion steam vaporization. During follow-up visit the observations like clinical and laboratory markers suggest remarkable improvement and alleviation of symptoms. During 2 months of treatment adherence, we also observed a marked decrease in lung opacities and no honeycombing in HRCT than in previous reports. This case report recommends the importance of an alternative medicine system restricted to the prophylactic purpose and has a role to play in post covid19 infected patients.

Introduction

Coronavirus is a single strand positive RNA virus outbreak in December 2019 and by the end of 2020, almost everyone become very well aware about it. The immune system of patients plays a vital role in response and recovery against coronavirus. The comorbidities and elderly are mainly affected in mortality reports.[1-4] The symptoms and laboratory markers are considered for improvement in health, but virus characteristics and patients' immune status might affect recovery. Studies have reported the chances of reinfection in coronavirus are also exist.[5] The viral load is an important parameter to consider the impact of the virus and duration of illness in patients. The reported studies suggest maximum respiratory shedding duration of the virus is 83 days, but no study detected live virus beyond 9 days.[6] Generally, patients after discharge from the hospital are usually advised to follow 14 days home quarantine. The patient's age, percentage of damage in imaging studies like HRCT, non-adherence to medications, and post-discharge care are further required to assess to determine appropriate post-discharge home quarantine period.

Case Study

The current case study presents here to describe the possible chances of the reactivation or re-occurrence

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or might be some other factors role to identify in this coronavirus patient. Mr-X, a male 50-year-old with complains of breathing difficulty, coughing and fever, presents to our clinic seeking treatment. Before progressing, we obtained consent from patients to utilize the information for further progress on treatment and utilization of such information to better healthcare in the future. Patient had provided his previous medical history for better understanding and diagnosis. After retrieving and analyzing all previous history, laboratory details, and thorough conversation, we found possible covid19 reinfection or reactivation chances.

Mr X complained of cold, coughing, headache, fever, difficulty in breathing consulted to the hospital, and current situation demands investigation of some laboratory test for Coronavirus screening. Mr- X had a history of psoriasis. Apart from psoriasis patient had no other existing comorbidities. His laboratory and imaging results are mentioned in below Table 1

The RT-PCR was negative. The oxygen saturation and D-dimer are also elevated. The imaging study HRCT reveals 20-40% lung involvement, as well as mild thrombocytopenia and low lymphocytes, were observed. From clinical investigation and supportive laboratory reports, he was diagnosed with covid19. He was admitted for 10 days in hospital. During the hospital admission period his medication chart includes hydroxychloroquine, dexamethasone, ceftriaxone, omeprazole, ondansetron, vitamin C tablets, and azithromycin 500 mg in hospital. Following 10 days later, Mr-X received a discharge from hospital because of presenting no fever and symptoms during this period. He was advised to follow 14 days home quarantine period for safety purposes. His discharge medications were tablet Dexamethasone 6mg, tablet Paracetamol for fever, Tablets for vitamin C and Omeprazole capsules for 10 days. He was advised to follow up 10 days later. Post-follow-up, he consulted in another OPD unit for better outcome and was prescribed tablet pirfenex-200 for month. But still post discharge weakness, chest discomfort and difficulty persist.

Table 1: Past clinical information of patient

Parameters	*Values*
RT-PCR	Negative
HRCT	20-40% involvement
HB(gm/dL)	14.3
SpO2 (%)	93 on room air
RR(per minute)	20
D-dimer (mg/mL)	1250
LDH(U/L)	470
WBC(per microliter)	2990
Platelet(per micro litre)	134000
Creatinine	0.7

This time Mr-X present to our Dhanvantari clinic, Vyara-Gujarat for seeking treatment for the problem. We advised some laboratory parameters for better clinical picture. The reports are as follow in Table 2.

Following laboratory report we were came to the conclusion of possible case of reactivation or reinfection of covid19. We asked him to initiated treatment of Mr-X with T-AYU-HM Premium tablets 600mg BD and advised onion steam vaporisation for 2 min for 21 days. For any kind of medical assistance the consultant remained in contact throughout period of treatment. Regular follow up for clinical parameters like fever, coughing, difficulty in breathing, Spo2 monitored and updated regularly for safety purpose. Laboratory parameters observed on follow up visit are mentioned as below in Table 3.

On 21st day report patient's inflammatory markers were improved remarkably. But his imaging study show

Table 2: On baseline day patients report of laboratory parameter

Parameters	*Values*
Hb(gm/dl)	14.5
RBC(in millions)	4.57
WBC(per micro litre)	7100
Platelet(per micro litre)	234000
Neutrophils	68
Lymphocytes	29
ESR(mm/hr)	18
CRP(mg/L)	9.6
D-Dimer(mg/ml)	845.26
LDH(U/L)	238.4
SpO2	99
Blood Pressure(mmHg)	160/110
Body temperature	97

Table 3: Follow up visit clinical parameters evaluation.

Parameters	*21st day*	*38th day*	*65th day*
Hb(gm/dl)	14.8	14.5	15.7
RBC(in millions)	4.69	4.42	4.93
Neu	61	52	57
Lym	33	42	39
WBC(per micro litre)	6000	5200	6800
Platelet(per micro litre)	234000	232000	178000
ESR(mm/hr)	8	08	08
CRP(mg/L)	1.2	0.8	1
D-dimer(mg/ml)	158.7	258.6	246.9
LDH(U/L)	221.7	218.5	221.6
B.P(mmHg)	151//103	155/96	150/88
BT	97.2	36.6 c	36 c
SpO2 (%)	92	97	97
PR	93	86	99

HRCT report was 50 lung involvements and his Spo2 was 92. With discussion and continuous observation patient was feeling clinically well so deny hospital admission and provide his consent preferred ongoing treatment so only T-AYU-HM Premium 600mg BD daily.

Discussion

The patient didn't met with any covid19 positive post discharge and suffered twice more than 40 percentage ling involvement indicating pneumonitities suggested the reactivation of coronavirus. The patient improved progressively during the course of treatment. During early phase treatment HRCT report exhibit pneumonities. But it was already reported that initial follow up HRCT images often exhibit progression from illness onset to early stage. There was marked improvement observed in recovery of viral pneumonities. During last 65th day imaging report no honeycombing or active fibrosis are seen. Observation decrease in opacities is seen compare to 21st day report of patient in HRCT. Generally the inflammatory markers like ESR, CRP and LDH are also elevated in patients developing pneumonia in covid19.But in this case the inflammatory markers like CRP, ESR and LDH are improved progressively suggestive of improvement in inflammatory condition and decrease virus induce complications.[7,8] Patient D-dimer level observed improvement in patient during course of treatment suggestive of impact of T-AYU-HM Premium on maintaining cellular integrity prevents hypercoagulation state of vascular system.[9-12]

The case we discussed here is possible chances of reactivation or recurrence of coronavirus. There are many contributor factors in disease progression or reactivation or recurrence of coronavirus like treatment duration, care and safety measures during post discharge, immune problem like psoriasis in this patient.

Mr-X has history of psoriasis which is an immune system problem. Therefore a chance of coronavirus infection in patients with immune system problem is always more preferential compare to others. Previous studies have also reported that Psoriasis patients also have chances of lymphocytopenia.[13] As lymphocytopenia provides more possible chances of uncontrolled progress of virus in patients. Patients previous record on day hospital admission suggested lymhocytopenia and mild thrombocytopenia was already present which indicates incapability to fight against coronavirus.[14] Patient was started on immunosuppressant with condition like psoriasis and low white blood cells might be a possible reason for virus reactivation.[15,16]

During previous hospital history negative, RT PCR might be suggestive of early phase detection or probable sampling or testing errors. There are also probable chances that detecting too early in the course of infection may give false-negative results. But other imaging studies and laboratory markers give supportive evidence of virus invasion.[17] Mr-X treatment during hospital admission like azithromycin showed synergistic antiviral effect against coronavirus when combined with hydroxychloroquine.[18] It was also studied that hydroxychloroquine induce psoriasis. Therefore careful monitoring is advised in such patients.[19] A previously reported study mentioned that hydroxychloroquine and azithromycin could not improve the mild to moderate level patients' clinical features at 15 days.[20] Patients antibody response against coronavirus observed in immunoglobulin study was also absent. Previous evidences suggest patients infected with coronavirus exhibit antibody response, but how long their protection last and capacity to protect in immune system problem patients also need to be further addressed.[21] Pirfenidone is an anti-fibrotic drug to accelerate recovery from fibrotic lesions in healed patient and avoid serious complications and therefore considered useful elements.[22] The drug possesses the potential to down-regulate angiotensin, convert enzyme receptors, and reduce inflammation but still efficacy against coronavirus, especially in immune-compromised patients requiring further studies. There might be a possibility of inflammatory rebound impact due to immune system problem patients exhibit clinical presentation of recurrence type explanation.

Elderly and patients with compromised immune system problems infected with coronavirus might require more care and attention in the post-discharge period. Weaknesses, weightloss difficulty in breathing are common problems that impacted patient's mental health status during recovery. Previous studies have already mentioned the importance of herbal medicine in the treatment of covid19, and some of the ancient medicinal plants do have a possible role in fight against it.[23,24]

Conclusion

Treatment with T-AYU-HM premium and onion steam vaporization, the possible case of coronavirus reactivation or reinfection patient was improved remarkably. Clinical parameters like viral pneumonitis and fibrotic scares also improved remarkably well by adhering to medication in patients. There was remarkable improvement seen in CRP, ESR and D-Dimer. These observations suggest that an alternative system of medicine might become important in post discharge recovery of coronavirus infected patients. The patients having other immune system problems like psoriasis require much attention during the treatment of coronavirus. There is a dire need to emphasize post-discharge or post-infection recovery of patients as reinfection and recurrence are always possible. Patients' immune system and adherence to post-discharge medication, self-care, and boosting immunity might become vital parameters in the recovery of coronavirus patients.

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