



A CASE REPORT ON CO-INFECTION OF COVID-19 WITH MALARIA

General Medicine

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ABSTRACT

SARS Cov-2 is a new strain of coronavirus that's appeared at the last quarter of 2019 in China. Malaria is a communicable disease caused by Plasmodium protozoa that is transmitted through a mosquitoes bite it is severe and fatal disease if not properly diagnosed and appropriately managed. Here we present the case of 39 years old male patient was attended to the outpatient department of internal medicine in tertiary care hospital in Hyderabad with chief complains of fever, chills, body pains. After all investigations she was diagnosed with SARS Cov-2 Positive. But after using all appropriate medications, there was no improvement in the patient condition. Then she was underwent for other investigations in that she was diagnosed with malaria disease. After using proper combination of anti-malarial medications, symptoms were subsided gradually or completely resolved.

KEYWORDS

SARS COV-2, Malaria, co-infection, fatal condition, antimalarial therapy.

INTRODUCTION

SARS CoV 2 is a new strain of coronavirus that's appeared at the last quarter of 2019 in China. this virus can be transmitted from human to human and has spread widely throughout the world so that in March 2020 WHO has declared covid-19 as a pandemic. Malaria is a communicable disease caused by plasmodium protozoa that is transmitted through a mosquitoes bite it is severe and fatal disease if not properly diagnosed and appropriately managed. There are several types of plasmodium exist but plasmodium falciparum is the most dangerous one. fortunately, early diagnosis and proper treatment have a good prognosis. the affected person usually experience fever, tiredness, malaise and body pains (1&2).

CASE STUDY

A 39 years old female patient was attended to the outpatient department of internal medicine in tertiary care hospital with chief complains of fever, chills and body pains. After that she was underwent for series of investigations like CRP and dengue virus antigen detection (NS1) and Rt-pcr and CT scan chest, complete blood profile. In that CRP was found to be 20mg/l and negative report of NS1. Finally, she was diagnosed with SARS COV 2 positive and CT scan chest report was normal. Then she was prescribed with appropriate medications like antibiotics and ivermectin, favipiravir, combination of levocetirizine and Montelukast, vitamin-D, multivitamin supplements and vitamin-C, pantoprazole. She was continued the medications for 10 days and temporarily relived symptoms and again she had complained fever and chills at night time. After 10 days again she was underwent with HRCT chest scan showed to be normal or not significant. Then she was underwent for investigations like widal test and malaria smear. Then she was found to have plasmodium vivax and widal test was negative. After that she was treated with appropriate combinations of anti-malarial medications followed with primaquine. Then she was symptomatically improved or symptoms were subsided gradually.

DISCUSSION:

In this case presentation patient had both conditions of covid-19 malaria. Malaria is still included in the major global health problem within the number of patients reaching to 19 million worldwide and estimated 65000 people died from malaria in 2017. The increasing number of covid-19 patients around the world is burning the health system previously over helmet in controlling various diseases both infectious and non-communicable diseases including TB HIV and malaria. The rapid spread of covid-19 increases the risk of co infection with different pre-existing pathogens. Malaria is a parasitic infections diseases caused by plasmodium falciparum, vivax, ovale, malaria which attack erythrocytes and is characterized by the presence of sexual forms in the blood (1&2).

Zubair Shahid et al, reported a case of covid-19 with malarial infection caused by plasmodium vivax and patient had been history of

plasmodium vivax malaria in one year back. In this case patient had covid-19 and malaria infection caused by plasmodium vivax similar but no history of malarial infection (3).

Napoli E.P et al, protective effect against covid-19 infection or disease progression (4). In contrary Alexandra et al, based on studies they concluded that malaria is increasing the risk of infection of covid-19 a greater number of deaths occurred with infection of malaria with covid due to interruption of services of malaria or other infections in pandemic (5).

According to current WHO guidelines with inside the case of demanding situations because of covid-19 pandemic malaria diagnosis need to be taken into consideration for all fever instances in endemic countries. on the other hand, patients with covid-19 associated symptoms and that negative malaria test should be isolated to rule out covid-19 until repeated virological sampling reduces the potential risk of transmission (6).

Abbar bakery elmaik et al, reported a case with covid-19 in DM patient with malaria like symptoms In their case first patient was treated with antimalarial drugs and symptoms slowly disappears within 7 days then patient complained again mild fever headache and sore throat then she was tested for covid-19 by rt-pcr in that she was found positive covid-19. but in our case patient was first diagnosed with covid-19 then he was treated with appropriate covid medications but again she had complained fever and chills at night time then patient was tested for malaria smear it was found to be positive (7).

Early identification of patients with covid-19 who are co-infected with other viral or bacterial pathogens is essential for deciding on the remedy alternatives and it will be likely be useful for decreasing the rate of mortality. the healthcare expert has to be aware about the possibility of multiple coinfections, because co-infection of covid-19 with malaria TB dengue hepatitis and influenza have already been reported with an unfavorable outcome (8).

Niraj N mahiyan et al, conducted a retrospective observational study in the deformed coinfection of with malaria or dengue in hundred patients but they didn't mention number of covid-19 patients infected with specific condition (like dengue or malaria).

There is a marked resemblance in the presentation of covid-19 patients with malaria or dengue currently in patients with several episodes there is an inclination towards h covid to testing rather than testing for other infections which may mislead the clinicians. malaria and covid-19 can induce cytokines storm and coagulopathy and can result in serious complications.so it is important to have correct epidemiological approach and diagnosis for avoiding complications in future pandemic specially in endemic countries for malaria and dengue (9).

CONCLUSIONS

In this case, patient had both conditions covid and malaria. So based on this report we recommend that it is important to alert the physicians to consider other conditions or infections with covid. Because covid and malaria showing some similar feature like fever, chills and body pains. so it is difficulty to physicians for diagnose these types of similar conditions when covid was diagnosed. So based on this report we finally concluded that possibility of occur other infections like malaria with covid and delayed diagnosis of malaria leads to increase severity of disease and complications resulting in morbidity and mortality.

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