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A Comparative Study between Efficacy of Ivermectin with Fluoxetine versus Standard Care Treatment among Outpatients with Early Sars Cov2 Infection

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ABSTRACT:This research paper is about the possible treatment options in early SARS Cov2 infections using repurposed drugs mainly ivermectin and fluoxetine.There are many drugs that were used during the last one year to fight the pandemic. There is a lot of confusion regarding the possible treatment plan as Covid 19 is a complex and extremely new sort of health problem. Ivermectin and Fluoxetine were been used separately for the treatment by many physicians. This study explores the potentials of these two drugs when given in a combination therapy in an outpatient setting. Thus, proving the good possibility of have a lesser mortality rate if treatment commences as soon as diagnosed.

KEYWORDS: Ivermectin, Covid, Fluoxetine, SARS Cov2, Repurposed drugs, coronavirus, immunomodulators.

I. INTRODUCTION

In the year 2020 and 2021 many of us have faced hardships secondary to the lockdown, financial meltdowns, and loss of loved ones. This article is a part of a retrospective study to analyse the efficacy of certain drugs in preventing covid deaths. Covid-19 is a complex disease. It behaves differently in each patient depending on the host response, comorbidities, age, time of hospitalisation, and viral load. Increasing age and presence of comorbidities such as hypertension, diabetes and coronary artery disease were associated with increased severity in the form of needing oxygen therapy as well as death. The symptoms and severity may range from asymptomatic to very severe forms needing ventilatory support and high levels of inspired oxygen. It is extremely difficult to predict which patient will progress to severe diseases, hence it is very important to have a standardized care plan to decrease the mortality rate. Moreover, COVID can leave the patient vulnerable to various other problems such as organ failure, secondary bacterial infections and sepsis. Early hospitalisation and consultation with a trained doctor can decrease such problems. There is no definitive treatment plan that works well for covid; hence it is vital to have the knowledge about the certain repurposed drugs to treat covid. Ivermectin has been used to treat many covid patients by many physicians, there is very little data about the drug's efficacy on Sars cov2 virus. In the later month of 2020 and early month of 2021, me and my colleagues, out of desperation, had to look for alternative effective treatment for covid. We have realised that standard care that was advised by the governments and WHO was not working, hence we had to sort the issue on our own. We realised that a combination of ivermectin and fluoxetine if given in the early phase of infection, death could be prevented. The article explains the usefulness of these drugs when compared with prevailing standard care treatment options for mild covid patients.

AIMS AND OBJECTIVES

To compare the efficacy of ivermectin and fluoxetine in the treatment of covid 19 diseases.

II. METHODOLOGY

This is a retrospective study done by checking the prescription data of 1673 patients who were treated as outpatients when immediately diagnosed to have covid 19 infections. Two groups A and B were created in equal size to compare after excluding the remaining as per exclusion criteria. Group – A were patients who received ivermectin 12mg once a day for 5 days, fluoxetine 20mg once a day for 14 days and with or without standard care treatment. Group – B consisted of patients who were

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treated with standard care treatment mostly given azithromycin 500mg once a day for 3 days and multivitamins such as Vitamin C, D3, B-complex and zinc. 112 patients were chosen in each group to be compared. As this was a retrospective outpatient study, we could only consider comparing the development of breathlessness, the need for oxygen (desaturation), admission in hospital or intensive care unit, need for ventilation and death. All this was done by looking into the patient prescription data and a simple telephonic consent and questioner.

Inclusion criteria

1. Only early covid infections were included
2. Patients who took these drugs as outpatient were included
3. Only COVID 19 RT-PCR positive patients were included

Exclusion criteria

1. Age more than 75years and less than 20 years
2. Patients with chronic organ failure such as CKD, CAD, CLD
3. Severe covid infections with oxygen requirement or breathlessness.
4. Pregnant women or lactating mothers
5. Patient who discontinued the treatment or are not willing to take any one or both the drugs.
6. Patients who were vaccinated either with one dose or two doses of vaccination
7. Patients who were on steroids or remdesivir

A total of 224 patient data was used to analyse the efficacy of these drugs. All patients or patient relatives (deceased due to covid 19 infection) were asked to answer a simple six-point questioner over the phone.

Questions asked

1. Were you breathless during your illness due to covid?
2. Have you taken oxygen therapy for desaturation or did your oxygen levels (spo2) dropped less than 93% anytime during your illness?
3. Have you been hospitalized due to covid?
4. If yes, have you been kept in ICU?
5. Were you given invasive or non-invasive ventilation of any kind?
6. Can you give us a verbal consent to publish this data?

Ivermectin: Ivermectin is a broad spectrum antiparasitic agent that in recent years has shown to have some antiviral activity against a broad range of RNA viruses in vitro. The drug may have antiviral effects by inhibiting the importin (IMP) α/β receptor, which is responsible for transmitting viral proteins into the host cell nucleus. Do Not start dexamethasone along with ivermectin, Dexamethasone increases the blood brain barriers permeability of ivermectin.

Dosage: No accepted dosage in covid but 12mg once a day up to 5 days have been used by many clinicians safely.

Fluoxetine: It is a SSRI which can inhibit Serotonin production in the body and decrease Serotonin levels in the platelets and hence decrease the excessive production of Serotonin during the periods of storm and lung damage. Usually works well, if given for at least 10 days, hence it should be started as soon as a patient is diagnosed COVID positive.

Dosage: ideally 20 to 40mg once a day for 2 weeks.

III. RESULTS

As per table A we can see that in group A only 5 people that is 4.46% became breathless at rest or on exertion out of 112 patients and only 2 patients that is 1.78% desaturated to less than 93% spo2 among the 112 patients, whereas in Group B 21 patients that is 18.75% became breathless and 16 patients that is 14.28% desaturated to less than 93% spo2.

As per table B we can understand that from group A only 2 patients (1.78%) required admission in hospital and moreover only one patient (0.89%) from them required admission in ICU. Whereas in group B out of 112 patients 12 patients (10.71%) required hospitalisation and 9 patients (8.03%) required ICU care.

Number of patients who developed breathlessness and desaturation, spo2 of < 93% out of the 112 in each group. TABLE-A

Symptoms	**Group- A**	**Group- B**
Breathlessness	5 (4.46 %)	21 (18.75 %)
Desaturation	2 (1.78 %)	16 (14.28 %)

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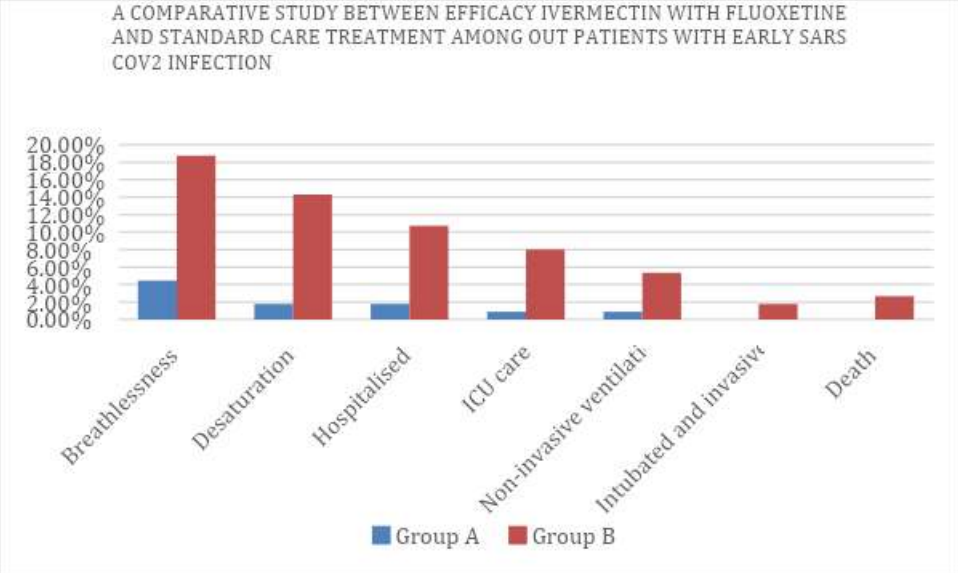
Number of patients who needed hospitalization and intensive care among the 112 in each group.
TABLE-B

Requirements	Group- A	Group- B
Hospitalised	2 (1.78 %)	12 (10.71 %)
ICU care	1 (0.89 %)	9 (8.03 %)

Number of patients who needed hospitalization and intensive care among the 112 in each group.
TABLE-C

Consequences	Group- A	Group- B
Non-invasive ventilation	1 (0.89 %)	6 (5.35%)
Intubated and invasive ventilation	0 (0 %)	2 (1.78%)
Death	0 (0 %)	3 (2.67%)



From the above table C, we can see that only one patient (0.89%) who was admitted in the intensive care required non-invasive ventilation in Group A and none were intubated and no deaths happened in this group. But in Group B 6 patients (5.35%) out of 9 intensive care admissions required non-invasive ventilation and 2 patients (1.78%) out of 9 intensive care admissions were intubated and there was a total of 3 deaths (2.67%) in group B among the ventilated patients.

IV. CONCLUSION

It is very clear from the above data that patients who consumed ivermectin and fluoxetine in the early phase of covid could avoid hospitalisation, intensive care unit treatment and death. It is to be noted the group that consumed these drugs had a 0% mortality rate. Hence these drugs are ideal for treating covid 19 infections in the early phase of the infection.

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