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Prescription pattern among mild to moderate COVID-19 patients in Tertiary care center;

Anil Neerukonda Hospital,Vishakapatnam.

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Abstract
Objectives:1.To study the various prescription pattern among mild to moderate COVID-19 patients in District Covid 19 hospital , Anil Neeru Konda hospital 2.Evaluate prescriptions of COVID 19 patients   admitted in Covid care center of Anil Neerukonda hospital. **Materials and methods:** The institutional ethics committee of ANH approved the study protocol. **The** present study was a cross sectional descriptive study, conducted over a period of 5 months from April 2020 to August 2020. in District Covid care centre Anil Neerukonda Hospital , Vishakhapatnam,Andhra Pradesh.**Selection method**: Total   188 patients of either sex who fulfilled our inclusion criteria were evaluated . **Inclusion criteria**: a)The prescription pattern data were collected from all the patients of either sex in the Covid care center of ANH , Visakhapatnam, in patients of Corona virus positive time period between April 2020 to August 2020.b)who were given consent to participate in the study and must have diagnosis of COVID -19 as defined by ICMR guidelines.**Exclusion criteria:**a)Patient below the age of 18 years and above 60 years b)Patient with other co morbidities like Diabetes mellitusc)Patient with renal failure.d)Patient with recent M.I.e)Patient with recent infections or major surgery f)Pregnant women**Results:**A total 188 prescriptions were collected and analysed.**Conclusion :**This study clearly indicated that the usage of various drugs in the community for Covid-19. Based on different guidelines and personal experience of the physician choice of the drugs were made. In this study we did not deal with efficacy and outcomes of the various drugs, but only focus has been made on prescription pattern.
Keywords: Management, Covid 19,prescription

Introduction

Coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered coronavirus.Most people infected with the COVID-19 virus will experience mild to moderate respiratory illness and recover without requiring special treatment. Older people, and those with underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease, and cancer are more likely to develop serious illness.The best way to prevent and slow down transmission is to be well informed about the COVID-19 virus, the disease it causes and how it spreads. Protect yourself and others from infection by washing your hands or using an alcohol based rub frequently and not touching your face. The COVID-19 virus spreads primarily through droplets of saliva or discharge from the nose when an infected person coughs or sneezes, so it's important that you also practice respiratory etiquette (for example, by coughing into a flexed elbow).COVID-19 affects different people in different ways. Most infected people will develop mild to moderate illness and recover without hospitalization.
Most common symptoms:
➢ Fever.
➢ Dry cough.
➢ Tiredness.

Less common symptoms:
➢ Aches and pains.
➢ Sore throat.
➢ Diarrhea.
➢ Conjunctivitis.
➢ Headache.
➢ Loss of taste or smell.
➢ A rash on skin, or discoloration of fingers or toes.
Serious symptoms:
➢ Difficulty breathing or shortness of breath.
➢ Chest pain or pressure.
➢ Loss of speech or movement.
On average it takes 5–6 days from when someone is infected with the virus for symptoms to show, however it can take up to 14 days.
In India
On 11 March 2020,WHO declared Novel Coronavirus Disease (COVID-19) outbreak as a pandemic and reiterated the call for countries to take immediate actions and scale up response to treat, detect and reduce transmission to save people's lives.
The COVID-19 pandemic in India is part of the worldwide pandemic of coronavirus disease 2019 (COVID-19) caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The first case of COVID-19 in India, which originated from China, was reported on 30 January 2020. India currently has the largest number of confirmed cases in Asia,[8] and has the second-highest number of confirmed cases in the world after the United States,[9-10] with the number of total confirmed cases breaching the

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100,000 mark on 19 May,[11] and 1,000,000 confirmed cases on 17 July 2020. On 29 August 2020, India recorded the global highest single-day spike in COVID-19 cases with 78,761 cases, surpassing the previous record of 77,368 cases recorded in the US on 17 July 2020.[12][13] India currently holds the single day record for largest increase in cases, set on September 17, with an additional 97,894.[14]

Objectives of the study

1.To study the various prescription pattern among mild to moderate COVID-19 patients in District COVID-19 hospital , Anil Neeru Konda hospital

2.Evaluate prescriptions of COVID 19 patients admitted in Covid care center of Anil Neerukonda hospital.

Study design- a cross sectional descriptive study

Study location - was conducted in District COVID-19 care centre Anil Neerukonda Hospital , Visakhapatnam, Andhra Pradesh.

Selection method: Total 188 patients of either sex who fulfilled our inclusion criteria were evaluated . All COVID 19 patients with out co morbidities who admitted in our hospital with mild to moderate symptoms of the COVID 19 inclusive of both genders aged above 18 years were enrolled in study . upon prior consent from patients by telephone , data was collected which includes the patient demo Figic medication prescribed .

Study duration : over a period of 5 months from April 2020 to August 2020.

Selection Criteria

Inclusion criteria

a)The prescription pattern data were collected from all the patients of either sex in the Covid care center of ANH , Visakhapatnam, in patients of Corona virus positive time period between April 2020 to August 2020.

b)who were given consent to participate in the study and must have diagnosis of COVID -19 as defined by ICMR guidelines.

Exclusion criteria:

a)Patient below the age of 18 years and above 60 years

b)Patient with other co morbidities like Diabetes mellitus

c)Patient with renal failure

d)Patient with recent M.I

e)Patient with recent infections or major surgery

f)Pregnant women

Methodology

This study was conducted at District COVID-19 care centre, Anil Neerukonda hospital Visakhapatnam.

The institutional ethics committee of ANH approved the study protocol. The participants declared their willingness . Every 2nd in patient record from the District COVID-19 care centre of Anil Neerukonda hospital included in the study . Total 180 prescriptions were collected .

Results

Currently, there is no evidence from randomized clinical trials(RCTs) that any potential therapy improves outcomes in patients with either suspected or confirmed COVID-19. There are no clinical trial data supporting any prophylactic therapy. More than 300 active clinical treatment trials are underway. This narrative review summarizes current evidence regarding major proposed treatments, repurposed or experimental, for COVID-19 and provides a summary of current clinical experience and treatment guidance for this novel epidemic coronavirus[15].A total 188 prescriptions were collected and analyzed. among 188 patients 30 male patients and 10 female patients between the age group of 18-30 years, and 35 male patients and 12 female patients belongs age group between 31 - 40 years . highest number of 68 patients (include 48 male patients and 20 female patients) in our study between 41-50 age group of the patients .least number of patients 32 (include 25 male and 8 female) between 51 -60 years age group [table 1 , Fig 1]

The most common drug prescribed was vitamin C (98.9%) followed by multivitamin (98.4%) followed by ivermectin(95.7%) followed by doxycycline (94.7%) followed by paracet-amol (80.9%) , followed by azithromycin(85.1%) ,followed by pantoprazole (66.5%), followed by enoxaparin (16%), followed by amoxycillin (13.3%), followed by favipiravir (13.3%), followed by hydroxychloroquine (9%) [table-2 , Fig-2].

The most common antiboitic prescribed ivermectin (95.7%), followed by doxcycline (94.7%), followed by Azithromycin (85.1%), followed by amoxycillin (13.3%) [Table 3, Fig 3].

The most common multivitamin brand prescribed was " Zincovit" (37.84 %), followed by "Becozinc" (28.65%), followed by "Fourts B" (6.49%), followed by "Supradyn" (5.41%), followed by "A to Z" 2.70% [Table -4, Fig-4].

Table 1:Patient demoFigic details /Age distribution

Age	Male	Female
18-30	30	10
31-40	35	12
41-50	48	20
51-60	25	8
Total	138	50
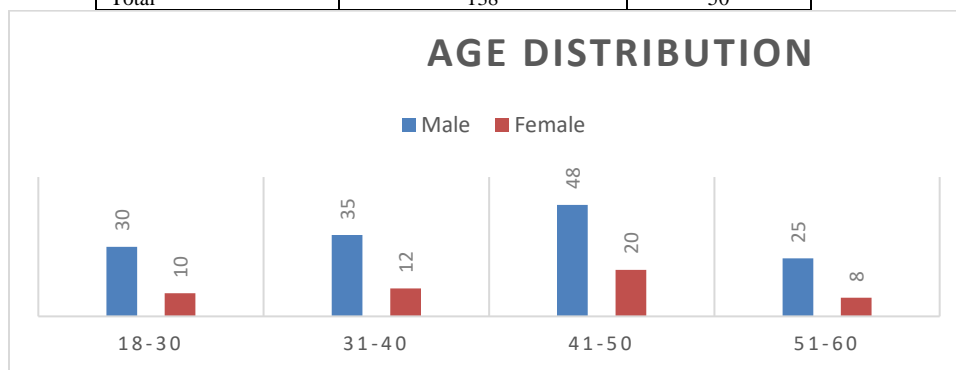
Fig 2:Age distribution

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Table 2:Most common prescribing drugs

Drug Prescribed	No. of Prescriptions	Percentage
Ivermectin	180	95.7
Doxycycline	178	94.7
Paracetamol	152	80.9
Azithromycin	160	85.1
Multivitamin	185	98.4
Vitamin C	186	98.9
Pantoprazole	125	66.5
Dexamethasone	68	36.2
Favipiravir	25	13.3
Hydroxychloroquine	17	9.0
Amoxicillin	25	13.3
Enoxaparin	30	16.0

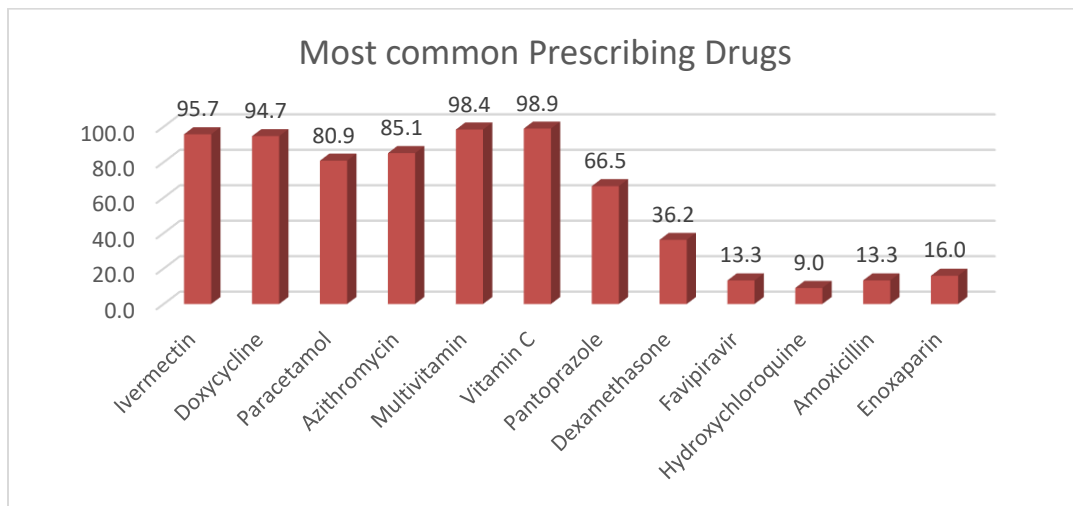**Fig 2:Most common prescribing drugs**

Table 3:Most common Antibiotic Prescribed

Antibiotic	No of Prescriptions	Percentage
Ivermectin	180	95.7
Doxycycline	178	94.7
Azithromycin	160	85.1
Amoxicillin	25	13.3
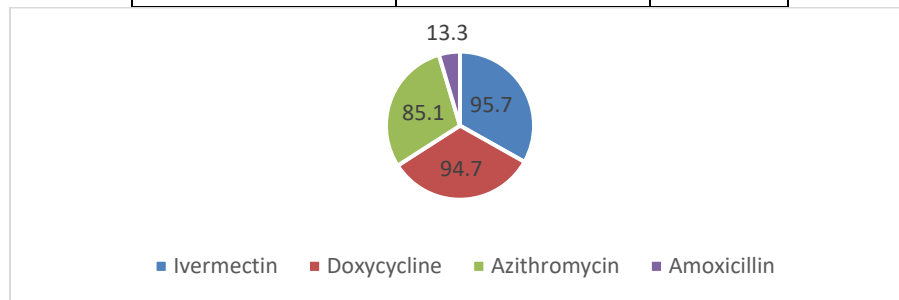
Fig 3:Most common antibiotic

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Table 4:Most common Multivitamin Prescribed

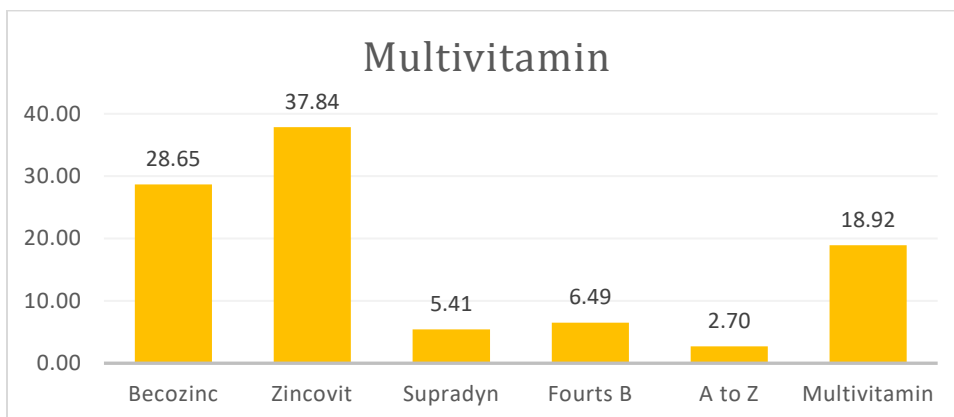| Multivitamin Trade name	No. Of Prescriptions	Percentage
Becozinc	53	28.65
Zincovit	70	37.84
Supradyn	10	5.41
Fourts B	12	6.49
A to Z	5	2.70
Multivitamin	35	18.92

Fig 4:Mutivitamin

Discussion

This dynamic sequence of overlapping events with considerable heterogeneity among patients creates an enormous challenge for clinicians and clinical researchers alike. In the initial stages of infection, administration of interferon might be helpful to boost respiratory antiviral responses , but most patients require no specific intervention. Those with more significant infections require careful monitoring to ensure that they are not developing severe hypoxemia, requiring supplemental oxygen [16]. Antiviral agents are most likely to be useful early in the course of infection when viral loads are highest and before irreversible damage has occurred [17], but it is not a simple matter to predict the likelihood of clinical progression during the earliest stages of illness.

The most common prescribed drug was multivitamin and Vitamin C supporting our study because, The greatest promise in combatting this life-threatening virus appears to be through reducing the cytokine storm associated with COVID-19.[18] This is where anti-inflammatory and antioxidant vitamins and supplements may play a potential role. Results of these ongoing clinical trials are urgently needed.At this time, we recommend vitamins and supplements as specific COVID-19 treatment in the context of a clinical trial. This recommendation is in-line with the major organizational guidelines for potentially effective COVID-19 treatments at the time of this writing. While the vitamins and supplements under investigation for COVID-19 described in this manuscript are generally without serious adverse effects and drug interactions, no therapy is completely free of risk. Additionally, while also being generally affordable, broad recommendation and implementation of unproven treatments are likely not cost effective. That being said, vitamins and supplements with existing evidence supporting their use in conditions associated with COVID-19, such as sepsis or ARDS, can be considered when potential benefit is determined to outweigh risk. [19]The most common antibiotic prescribed was ivermectin in our study. Ivermectin is a well-known anthelmintic agent from the late-1970s. In recent times, the antiviral function of ivermectin has been discovered. Doxycycline was prescribed along with ivermectin in our study Because patients with COVID-19 are in need of both antiviral and anti-inflammatory treatment as well as protection

against lung damage, studies of proposed combination therapy is warranted. As doxycycline is inexpensive and widely available, has a safe tolerability profile, and is an attractive option for the treatment of COVID-19 [20]Azithromycin can enhance the immune response against viruses by several actions. Also it can up-regulates the production of type I and III interferons (especially interferon-β and interferon-λ), and genes involved in virus recognition such as MDA5 and RIG-I . These mechanisms are universally involved in the innate response against infectious agents, and potentially against SARS-CoV-2.[21]In our study corticosteroids (Dexamethasone)36.2% , Dexamethasone is a corticosteroid used in a wide range of conditions for its anti-inflammatory and immunosuppressant effects.It was tested in hospitalized patients with COVID-19 in the United Kingdom's national clinical trial RECOVERY and was found to have benefits for critically ill patients. [22]Antiviral drug which is Favipiravir 13.3%. Favipiravir, an oral, broad spectrum RdRp inhibitor, an already approved drug for new and re-emerging pandemic influenza in Japan and has established and well characterized safety profile [23]Amoxicillin has been prescribed along with Azithromycin to treat COVID-19 infections same supports to our study [24] Some researchers have promoted chloroquine and hydroxychloroquine for the treatment and prevention of illness from a variety of microorganisms, including SARSCoV. Hydroxychloroquine can inhibit replication of SARS-CoV-2 in vitro. Some observational studies have suggested benefits of hydroxychloroquine for the treatment of Covid-19, whereas other treatment reports have described mixed results [25]Heparin may prove beneficial in treating the coagulopathy of this disease, utilization of therapeutic anticoagulation before the development of thrombosis in COVID-19 has not been systematically evaluated. Additionally, although heparin is known to possess non-anticoagulant effects that may be beneficial in COVID-19 [26]

Conclusion

This study clearly indicated that the usage of various drugs in the community for Covid-19. Based on different guidelines and personal experience of the physician choice of the drugs were made. In this study we did not deal with efficacy and outcomes of

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the various drugs, but only focus has been made on prescription pattern.

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