A CASE REPORT ON COVID- 19: REVIEW OF MEDICATIONS

Malapati Sowmya[1], Kaza Geethika[1], Sri Kala Kamireddy[2], Sreya Kosanam[2], Kona Vishnu Saraswathi[3], Abburi Vamsi[4]

Corresponding author:
Dr.Sreya Kosanam[2]
Assistant Professor,
Department of Pharmacology and Pharmacy Practice
Nirmala college of Pharmacy
Atmakuru, Mangalagiri 522503
Email id: sreyakosanam70@gmail.com

Abstract

Rationale:
COVID-19 is also known as Novel coronavirus 2019 or acute respiratory syndrome caused due to coronavirus or SARS-CoV-2 is an RNA virus belongs to β- Coronaviridae family.COVID also causes severe pneumonia and acute respiratory distress syndrome (ARDS), which can result in difficulty breathing and necessitate mechanical ventilation and intensive care unit management.

Patient concerns:
A 47-yearmale with a history of hypertension who was presented to hospital with worsening fevers, cough, and respiratory distress.

Diagnosis:
CT scan of the chest showed multiple subsegmental patchy ill, defined broncho centric and sub-pleural areas of ground glass opacities with septal thickening are seen in both the lungs and test of COVID also turned positive.

Interventions:
He was being treated aggressively in the intensive care unit with intravenous Prednisolone, Felbinac, Piperacillin/tazobactam.He also received a loading dose of remdesivir however was unable to complete the course due to sudden droppage of SP0$_2$.

Outcomes:
He remained critically ill and eventually passed away.

Lessons:
COVID-19 has become a global pandemic and a major hit to our healthcare systems, with a rapidly rising death rate. There is currently no approved treatment regimen for COVID-19 infections. The alarming increase in cases per day keeps researchers busy to find a cure and to reduce the global mortality rate.

Key words: Covid-19, CT scan, Felbinac, Mortality rate

Introduction:

Corona virus related to RNA virus of 30kb genome size that attack mammals and birds. And this virus is declared by WHO as a pandemic. Corona viruses belong to large family of viruses as mentioned in table no.1, that causes illness ranges from the common cold to more severe diseases such as middle-east respiratory syndrome (MERS), severe acute respiratory syndrome (SARS)[1]. The structure of genomic characterization of SARS-CoV-2 has shown that it is of zoonotic origin. Covid-19 is disease caused by new strain of coronavirus in which CO stands for corona, VI stands for virus and D stands for disease[2]. The disease was identified or came to knowledge in the year 2019 hence called as covid-19.

Unranked	Name of the virus
Realm	Ribovirus
Kingdom	Orthornavire
Phylum	Pisuviricota
Class	Pisoniviricetes
Order	Nidovirales
Family	Coronaviridae
subfamily	Orthocorona virus

Table no. 1: Family of corona virus[3]
Classification:

Corona virus enveloped by single-stranded positive sense RNA virus. On basis of their genomic organization COVID19 had been classified into four genera. Types of virus and originated from is given in table (2)[4].

Type of virus	Originated from
Alpha corona virus	Bats and rodents
Beta corona virus	Bats and rodents
Gamma corona virus	Avian species
Delta corona virus	Avian species

Tablen o. 2:

Types of viruses and originated from

Case report:

In April 2021, 47-year-old male patient admitted to emergency suffering with cold, cough, fever and body pains. With past history of Hypertension and no surgical and smoking history was reported but the patient had a contact with covid-19 patient. On examination the patient was middle aged men pretended with discomfort. Blood pressure on admission was 110/70, heart rate was 95beat /min, body temperature 98° C. the patient respiratory rate was 19 breaths/ min and SPO2 was 94% on room oxygen. The patient underwent a plain axial-high-resolution CT scan of the chest was performed with thin serial contiguous sections from thoracic inlet to the base of the lung and documental in soft tissue and lung window settings, this test revealed that CORADS4 [abnormalities suspicious for covid19 pneumonia] CT score is 17/25 and The blood test results showed random blood sugar 259, 0.6 lymphocytes, 6.0 neutrophils, 0.2 eosinophil, 0.1 monocytes, 0.1 basophiles and other investigation such as prothrombin time, activated partial thromboplastin time international normalized ratio and liver enzymes were not available. The Doppler study showed normal in left common femoral artery superficial femoral artery popliteal artery and both proximal thirds anterior tibial artery (ATA) and posterior tibial artery (PTA) with abrupt interruption of blood flow in distal 2/3 of ATA and PTA.

The following medications are used felbinac1grm I.V injection, Pantoprazole 40mg I.V injection, Methyl prednisolone 40mg I.V, Enoxaparin sodium 40mg, Paracetamol650mg, doxycycline hyclate100mg, zinc 100mg, Vitamin b_1 1ml, vitamin c 100mg, methyl prednisolone 500mg I.V injection, remdesivir100mg, acetylcysteine600mg, feldene20mg, piperacillin2mg, mucomix600mg, theophylline 10ml, furosemide40mg, hydroxylchloroquine200mg, ivermectin0.15mg, gunifenesin10ml syrup four times a day.

Next day again CT scan was conducted the record states that multiple subsegmental patchy ill, defined broncho centric and sub-pleural areas of ground glass opacities with septal thickening are seen in both the lungs. Commonly reported imaging features of covid-19 are represented. Clinicopathological correlation and further evaluation is suggested CT chest severity score 17/25 severe disease. On second day post-administration random blood sugar 133, WBC (white blood cells)8640, RBC (red blood cells) 4.85, blood urea 21, hemoglobin 13.3, platelet count 1.72 lakh per count, neutrophils 80, lymphocytes 14, eosinophils 4%, monocytes1%, basophils 1%. after one week of post admission in hospital, the patient pulse rate dropped and decreased SPO_2, resulting to death.

Discussion:

Severe viral pneumonia is caused by COVID-19, which rapidly progresses to ARDS. Wan et al reported that in a case series of 135 patients, 88.9 percent had a fever and 76.5 percent had a cough. Fatigue and myalgias (32.5 percent), headache (17.7 percent), and dyspnoea (13.3 percent) were less commonly reported[5]. The CT scan of the chest provided useful information because it corresponded to the trend of findings in infected patients[6]. Wan et al obtained CT scans on all patients in their study and discovered that the primary finding was bilateral involvement with multiple patchy or ground glass appearance. Huang et al discovered similar results, with bilateral involvement and multi lobular consolidations found in 98 percent of CT scans obtained. These CT scan findings are not unusual for a viral pneumonia[7].

When influenza A (H1N1) was discovered to be the cause of a pandemic in 2009, örtük et al discovered that 69.6 percent of patients with H1N1 had bilateral patchy pneumonic infiltrates and 41.3 percent had bilateral ground glass opacities in a retrospective review of 92 patients[8]. In this case report patient received vitamin C and zinc which are used to increase human immune system and improving outcomes in respiratory infections including pneumonia. In addition to vitamin and mineral supplements, Prednisolone and NSAIDS like Aceclofenac,Felbinac have obtained a large amount of attention for the treatment of COVID-19. An observational study of the compassionate use of remdesivir in 61 COVID-19 patients found clinical improvement in 36 of 53 patients (68 percent) and an overall mortality rate of 13% in COVID-19 patients[9,10].

Other COVID-19 treatments have also emerged, with promising results in ongoing clinical trials. Remdesivir have received the most attention. Remdesivir is an adenosine analogue that binds to viral RNA and causes it to prematurely terminate[11]. It has been shown to be effective in preventing viral replication in Ebola, SARS-CoV, and MERS-CoV infections. In our patient, within 2 days of starting remdesivir our patient Had expired due to sudden shortness of breath and decrease in SP O_2[12-14].

The goal of this review is to assess the best available evidence to determine whether there is an increased risk of developing COVID-19 as a result of acute NSAID use. Acute use of NSAIDs may increase the risk of developing more severe COVID-19 symptoms[15]. While our patient was critically ill in the ICU, it is unknown whether this medication contributed to further decompensation. More research and clinical trials are needed to fully understand the role of remdesivir and other medications in patients infected with COVID-19.

Conclusion:

There are currently no approved treatments for this viral pandemic. While several medications have been shown to be effective in clinical trials, more research is needed to determine dosing, treatment course, and side effects. The race to develop faster testing modalities to rapidly diagnose and manage these patients earlier remains the focus of the global healthcare system as the number of cases and deaths continues to rise.

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