Coronavirus and its Therapeutic Procedures
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Abstract:
In the year 2019 WHO (World Health Organization) has declared the coronavirus a pandemic. The disease which is spread more than one country at the same time in different geographical area is announced as a pandemic. Corona belongs to the corona family. This is the new virus which was first evolved in Wuhan in China on 31 December 2019. Corona virus cause the severe acute respiratory syndrome. As this is the new virus so all the scientist worldwide is trying to produce an effect drug for this virus, also, a effective treatment strategy is also work in progress. So, far no particular drug or vaccine has been suggested by Centres for Disease Control and Prevention (CDC) and World Health Organization (WHO) to use against the corona virus treatment. However, several protocols are introduced for the treatment by using the older drugs.

I. INTRODUCTION
Covid-19 is a virus which belongs to the corona family, it gains its name because of its crown like structure. This virus has the very fast spreading rates. And all the age groups of population is equally effect by this virus, no age group is left unaffected by this virus. Although all the age group are at risk but the people having diseases like diabetes, respiratory diseases, high blood pressure are at higher risk.

Virolology and symptoms of COVID-19
Corona virus is a positive sense virus and it look like a crown when seen under the electron microscope [4,5]. Corona virus is divided into four subtype they are alpha CoV, beta CoV, delta CoV, and gamma CoV[5]. Corona virus is evolved from the beta corona virus (β-CoVs or Beta-CoVs) which is responsible for severe acute respiratory syndrome [6]. People affected by this virus have a symptom like light fever, cough and shortness of breath [6]. The incubation period of this virus is not fixed, it vary from person to person, it mostly depends on the immune system of affected person and its health. The approx. incubation period of this virus is 6 to 21 days. The symptoms are start revealing from the 5.2 days of post infection.[7]

However corona virus which is evolved have approximate with the common cold virus and it have 15% of common cold symptoms, its symptoms very from person to person from mild to sever to even death. [8]

Transmission of Covid-19
It is not much known about the transmission, but it is recorded that it is transmitted from the infected person to the healthy person by droplets in the environment by sneezing and coughing.[9]

General medication
In the this only one thing is important and that is the immune system. So, the diet which boost the immune system is advices to taken, diet which also, includes the macro nutrition, the vitamin A,B,C,D and E, some minerals and fatty acids are also beneficial for the healthy. [10].

Therapeutic procedures of Covid-19:
Possible therapeutic strategies which are already recomm ended for SARS-CoV-2 is shown in scheme 2 [6, 10, 11]

Care procedure
There are various lines of control on which the treatment or care of Covid-19 patients are taken care. First line is to reduce the fever of the patients which have a symptom of fever, for this paracetamol and guaifenesin is given for fever and non-productive cough.[6] for s including allergies, common cold, and infection guaifenesin is used. Paracetamol is also known as APAP/acetaminophen which is used for the treatment of mild fever and pain. Another important and first line therapy for the covid-19 patient is the oxygen therapy which have low level of oxygen. [6,11]

Potential medication to treat Covid-19
Most of the antiviral drug have shown the in vivo activity against the SARS Covid-19 and they have the potential for drug repurposing. (also called drug repositioning, re-tasking or reprofiling). Drug repurposing is a technique in which the old drug candidate can be modified for the new virus by making few changes in the old drug model. Till now no specific drug is recommended for the Covid-19. [6]. Several scientists worldwide are endeavouring to discover the drug or vaccines against the Covid-19 virus. [12]. According to the existing research some techniques like in silico methods [13, 14]. In silico predictions/methods are computational approaches that provide innovative candidates testable [12]. Drug repurposing [13, 15, 16] or drug repositioning [17, 18], and pathogenic mechanisms of the virus [10, 12] can be also fruitful in distinguishing accurate therapeutic targets to synthesize specific antivirals against this novel virus [19].

Antiviral drug
Some of the antiviral drugs like protease inhibitors including chymotrypsin like (3C-like) and papain-like protease (PLP) which are already discovered in the past are specific for Covid-19. Diarylethantoids is the drug which belongs to papain-like protease inhibitors. While cinanserin and some flavonoids belongs to chymotrypsin-like (3Clike). Another specific antiviral drug for Covid-19 is spike (S) protein-angiotensin-converting enzyme 2 which also include human monoclonal antibody, nicotinamide etc. [10] Apart from the specific drug development for Covid-19 another very useful method is to used the old broad-spectrum antiviral drugs for the treatment of Covid-19 such as protease inhibitors of HIV and hepatitis C antivirals till the discovery of specific drug or vaccine [7, 20]. Another very important use of using the old
drugs is we already have the information of all the adverse and side effect of that particular drug. [21]. One drug called remdesivir which is the inhibitor of viral protein as the analogue of adenosine have shown the effective treatment against Covid-19. [22]. One another study is also introduce by Kim et al. success in treating MERS-CoV disease using triple combination treatment consisting of LPV/RTV, ribavirin, and IFN-alpha 2a in South Korea. [10]. Several old drugs get the approval for the use against the Covid-19 such as ribavirin, lopinavir/ritonavir (kaletra), remdesivir, nelfinavir, [10], and arbidol (an antiviral drug available in Russia and China) [23]. Favipiravir is also undergoing clinical trials to combat COVID-19 [27].

Enhancer of immune system
Interferons, thymosin α-1 (Ta1), thymopentin (TP5, munox), levamisole, cyclosporine-A are useful in improving the immune system. Chloroquine is the drug which is used for the treatment of malaria also shown the reliable activity in pneumonia caused by COVID-19 in several clinical trials [21, 23]. In vitro evaluation of hydroxychloroquine from chloroquine shown the more potential against the Covid-19. Moreover, it is safer than chloroquine and it can also be used for the longer period of time. [21]. Another treatment method such as Intravenous immunoglobulin (IVIG) is one of the proposed treatments for patients with severe intensity of COVID-19 [23, 24].

Passive antibody therapy
WHO invites the researcher from all over the world for the analysis of the therapeutic techniques which is used against the Covid-19. One such technique is the use of plasma of the recovered patient from Covid-19 and now reported negative for more then 14 days. [26]. Since the monoclonal antibody shown the positive effect in many diseases from ancient times, existing studies about neutralizing monoclonal antibodies against similar coronaviruses such as SARS-CoV and MERS-CoV propose potential therapy against COVID-19 [19]. In addition, due to the emergency the FDA said it was preparing the easy access of the plasma to the patient which are in critical stages. [26].

Other potential drugs
Other drugs are also taken in treatment against the Covid-19 such as α-lipoic acid, oestriadiol and phytoestrogen, mucroporin-M1, and nitric oxide [10]. Another drug Imatimib is also taken against the Covid-19.

In one study of International Journal of Antimicrobial Agents, it was mentioned that the combination of azithromycin and hydroxychloroquine in clinical trial indicated viral clearance within 6 days [28]. Moreover, combination of azithromycin to Hydroxychloroquine have shown the great effects against the corona virus. [21]. One another drug Ivermectin have also shown the effectiveness against Covid-19. [29].

II. CONCLUSION
As the corona virus is the new virus and it is declared as the pandemic by WHO there is an emergency need of the drugs and vaccines against it, so, that it can be stop by spreading to larger population. Therefore, all the scientist is trying to develop a strategy against the corona virus. And all the drugs and vaccines which are made are under the clinical trials to check their efficacy and efficiency.

III. REFERENCES
[17]. F. Ayman, et al., Identification of FDA Approved Drugs Targeting COVID-19 Virus by Structure-Based Drug Reposi


