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RESEARCH ARTICLE

COVID-19: SOME MYTHS AND SOME FACTS

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ABSTRACT

The rapid spread of a novel viral disease COVID-19 is a recent threat worldwide. The World Health Organization (WHO) has declared this health-threatening outbreak a pandemic in March 2020. The infection rate is enormously higher than any other known infectious disease in recent decade. In the US, the government alerts the whole nation to be prepared for disruptions in daily life to control the spreading of the coronavirus, SARS-CoV-2 causing the COVID-19. In this review, we discussed the floating myths about the present health issue and their logical explanation with facts from the previous experiences with other Coronaviruses.

INTRODUCTION

In early 2020, a new virus, now known as SARS-CoV-2, has erupted at Wuhan city of China, and since then it became a point of fear, anxiety and a global threat (Cascella, 2020). It is originally another class of SARS group of virus, where SARS stands for *"Severe Acute Respiratory Syndrome"*. The very first SARS-CoV originated also in China in 2003 and killed about 10% of the victims' world-wide (WHO, 2003; Drosten, 2003). In 2012, another class of virus of the same group, MERS-CoV (*Middle East Respiratory Syndrome* coronavirus) originated in Saudi Arabia and causes death about 34% of the victims (Zaki, 2012; De Wit, 2016). In recent time, this new virus SARS-CoV-2 is such a virulent in terms of spreading ability, is approximately 1000 times higher than any other coronaviruses, may be killing the infected person not more than 2-3% so far, however became global Pandemic within couple of months from its origination. Whole world is so much conscious and worried, actually stopped the almost all the regular operations, like, School, College, Office, Hospitals, Transports, what not. The economy of all the countries, business, stock markets are all at stake. Clinicians, Governments, general public all are confused in these present days; what to do, what to say and how to protect the country, from the deadly disease COVID-19, not only the human survival but also all the countries down-wards economical standard. In this scenario we are trying to provide some logic against the many myths that are floating around on this mysterious disease, with some facts from the pervious experiences of the similar type of SARS virus infection (Tables 1-4).

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At this point most of the information are still presumptive, can not be said anything with concrete affirmation since the disease particle is very new and its transmission rate is so high that any Statistical data, prognosis are changing with unprecedented speed in every minute. Doctors, researchers, health care peoples are all overwhelmed with the situation. Having said all these we are trying to give a picture of myths and facts of COVID-19 related issues that general human community should know. Here, all the information was gathered from the authentic sources like, *Centers for Disease Control and Prevention* (CDC) and *World Health Organization (WHO), European Centre for Disease Prevention and Control.* Below, a number of questions about coronavirus and COVID-19 with their logical explanations were presented in different charts, in different categories.

DISCUSSIONS AND CONCLUSION

Like SARS and MERS coronavirus, SARS-CoV-2 (COVID-19) falls in the β–subgroup of all human coronaviruses. The name *'corona'* came from their microscopic structure where the crown-like spikes (corona) have been noticed on their surface. All those viruses that belongs to β–subgroup can cause a severe lower-tract respiratory illness with higher rates of morbidity and mortality. The other subgroup viruses, whereas, cause mild to moderate upper-respiratory tract illnesses, like the common cold (Centers for Disease Control and Prevention, 2019; WHO, 2019; Cui, 2019). Some basic knowledge of this new pandemic coronavirus, and its

comparison with other respiratory infections were compared in Figure-1.

Epidemiological Comparison of COVID-19 with other Respiratory Viral Infections

Disease	Flu	SARS	MERS	COVID-19
				
Pathogenic Virus	Influenza Virus	SARS-CoV	MERS-CoV	SARS-CoV-2
Basic Infection Ability (R_0)	1.3	3	0.2-0.8	2.0-2.5 *
Incubation days	1-4 days	2-7 days	6 days	4-14 days*
Hospitalization Rate	2%	Most cases	Most cases	Approx. 19-20% *
Annual Death (US)	10K-61K	None (Since 2003)	None (Since 2014)	N/A (Ongoing)
				* (As of August 2020)

Figure 1.

Table-1: COVID-19: Myths and Facts (Sources: CDC; WHO; NIH; Harvard)

SL#	Myth	Facts
#1	**Face masks can protect you from the virus.**	Standard surgical masks cannot protect from SARS-CoV-2 virus, as they are not designed to block out viral particles.
	Surgical masks can help prevent infected people from spreading the virus further by blocking any respiratory droplets that could be expelled from their mouths. By the way, SARS-Cov-2 is the virus that causes the COVID-19 Disease.	
#2	**You're way less likely to get Corona virus than the flu.**	Not necessarily.
	A single SARS-Cov-2 infected person can infect about 2.2 others, on average, whereas the flu infected person can infect 1.3 persons.	
#3	**The virus is just a mutated form of the common cold virus.**	No, it's not.
	Coronavirus is a large family of viruses that includes many different diseases, including common cold..	
#4	**Getting COVID-19 is a death sentence**	That's not true.
	About 81% of infected people have mild cases of COVID-19; about 13.8% reported severe illness, and about 2.3% of people were reported death, and they were at risk due to having severe other complications.	
#5	**Pets can spread the new coronavirus**	Probably not to humans.
	From previous experience with SARS suggests that no evidence of viral transmission from pet dogs or cats to humans are known .	
#6	**Kids can't catch the coronavirus**	Children can definitely catch COVID-19, though initial reports suggested fewer cases in children compared with adults.

Table-2: COVID-19: Myths and Facts

SL#	Myth	Facts
#7	**If you have coronavirus, "you'll know"**	No, you won't.
	COVID-19 causes a similar symptoms, initially like flu and the common cold, but could be ended into a serious pneumonia.	
#8	**The coronavirus is less deadly than the flu**	So far, it appears the coronavirus is more deadly than the flu.
	The annual flu typically has a mortality rate of around 0.1% in the U.S. In comparison, recent data suggests that COVID-19 has a mortality rate more than 20 times higher, of around 2.3% (as of Feb 18, 2020).(CDC Weekly)	
#9	**Vitamin C protects from COVID-19**	No evidence yet.
	However, Vit C can supports the immune function, shortens the duration of common cold, and acts as an antioxidants, in the body.	
#10	**It's not safe to receive a package from China**	It is wrong, and safe to receive mail from China
	A lack of survival conditions for viruses such as low Temp, humidity and lack of UV are missing during shipping.	
#11	**It is no more dangerous than winter flu'**	Many individuals who get coronavirus will experience nothing worse than seasonal flu symptoms.
	The overall profile of the COVID-19 disease, including its mortality rate, looks more serious specially to the elderly people and people with heart disease and diabetes .	
#12	**Alcohol or chlorine, can kill the new coronavirus**	No help in reality
#13	**Can heat kill the coronavirus?**	According to WHO: Hand dryers can't kill the virus, . UV lamps shouldn't be used to sterilize hands. Drinking hot water or taking hot baths won't kill it either.
	Public health experts say there's no way to know that heat can kill this virus or the outbreak will dissipate in summer.	

Table-3: COVID-19: Myths and Facts

SL#	Myth	Facts (Ref)
#14	**Can heat kill the coronavirus?**	According to WHO: Hand dryers can't kill the virus, . UV lamps shouldn't be used to sterilize hands. Drinking hot water or taking hot baths won't kill it either.
	Public health experts say there's no way to know that heat can kill this virus or the outbreak will dissipate in summer.	
#15	**Can coronavirus go through the skin?**	It may be possible that a person can get COVID-19 by touching a surface or object that has the virus on it and then touching their own mouth, nose, or possibly their eyes, but this is not thought to be the main way the virus spreads.
	More often than not, people get coronavirus through respiratory droplets produced when an infected person coughs or sneezes. "These droplets can land in the mouths or noses of people who are nearby or possibly be inhaled into the lungs," (according to CDC).	
#16	**Face masks don't work**	Wearing a face mask is certainly not an iron-clad guarantee that you won't get sick – viruses can also transmit through the eyes and tiny viral particles, known as aerosols, can penetrate masks. However, masks are effective at capturing droplets, which is a main transmission route of coronavirus, and some studies have estimated a roughly fivefold protection versus no barrier alone (although others have found lower levels of effectiveness).
	If you are likely to be in close contact with someone infected, a mask cuts the chance of the disease being passed on. If you're showing symptoms of coronavirus, or have been diagnosed, wearing a mask can also protect others. And also ***asymptomatic*** person can also infect others. So masks are crucial for your health and others. However, masks will probably make little difference if you're just walking around town.	
#17	**A vaccine could be ready within a few months**	Scientists were quick out of the gates in beginning development of a vaccine for the new coronavirus, helped by the early release of the genetic sequence by Chinese researchers.
	The development of a viable vaccine continues apace, with several teams now testing candidates in animal experiments. Vaccine may be available within a a year or so	

Table-4: COVID-19: Myths and Facts

SL#	Myth	Facts (Ref)
#18	**Is it mutating into a more deadly strain**	All viruses accumulate mutations over time and the virus that causes Covid-19 is no different.
	Different strains of a virus become depends on natural selection. Genetic analysis by Chinese scientists of 103 samples of the virus, taken from patients in Wuhan and other cities, suggests that early on two main strains emerged, designated L and S. The L strain appeared to be more prevalent than the S strain (about 70% of the samples belonged to the former), but the S branch of the virus was found to be the ancestral version. This may indicate the L strain is more "aggressive", either transmitting more easily or replicating faster inside the body. However, this theory is speculative at this stage – there haven't yet been direct comparisons to see whether people who catch one version of the virus are more likely to pass it on or suffer more severe symptoms.	
#19	**If a pandemic is declared, there is nothing more we can do to stop the spread'**	A pandemic is defined as worldwide spread of a new disease .
	Containment measures are not simply about eliminating the disease altogether. Delaying the onset of an outbreak or decreasing the peak is crucial in allowing health systems to cope with a sudden influx of patients.	

Further, various myths and questions with COVID-19 that are floating around, now-a-days, were discussed with logic and references (Tables). Hopefully, all our efforts will help to understand the COVID-19, and the measurements that should be adopted until any real vaccine or any other therapy comes out.

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Abbreviations:

SARS: Severe Acute Respiratory Syndrome

MERS-CoV: Middle East Respiratory Syndrome-Coronavirus

WHO: World health Organization

CDC: Center for Disease Control and Prevention

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