Introduction

COVID-19 originating from Wuhan city of China shocked the world with its stormy spread and deadly nature. On 11th March 2020, WHO declared it a pandemic. The dubious nature of disease with associated morbidity and mortality created panic and fear around the world which generated confusion, anxiety and misconceptions regarding its origin, nature, spread and treatment. These misconceptions among public favored negative practices leading to rapid disease spread, delay in acquiring the appropriate medical help and consequently increased morbidity and mortality. The facts and fictions surrounding the COVID-19 and the scientific evidence to resolve these misconceptions is necessary to lessen the morbidity and mortality of the disease by seeking timely and authentic medical advise. COVID-19 spreads by respiratory droplets. Different home remedies have only supportive role in recovery. The only solution to problem is dispelling the myths and strict practicing of respiratory and hands hygiene, physical interindividual distancing and avoidance of crowds as preventive measures.

Key Words: COVID-19, facts and fictions


COVID-19: Myths and Facts

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Abstract

The stormy spread of novel coronavirus around the world bewildered everyone. On 11th March 2020, WHO declared it a Global Pandemic. The progressing nature of COVID-19 disease with rising morbidity and mortality created panic and fear around the world which generated confusion, anxiety and misconceptions regarding its origin, nature, spread and treatment. These misconceptions among public favored negative practices leading to rapid disease spread, delay in acquiring the appropriate medical help and consequently increased morbidity and mortality. The facts and fictions surrounding the COVID-19 and the scientific evidence to resolve these misconceptions is necessary to lessen the morbidity and mortality of the disease by seeking timely and authentic medical advise. COVID-19 spreads by respiratory droplets. Different home remedies have only supportive role in recovery. The only solution to problem is dispelling the myths and strict practicing of respiratory and hands hygiene, physical interindividual distancing and avoidance of crowds as preventive measures.

Myth 1: Corona Virus is a bioweapon, deliberately compounded in Wuhan laboratory.

Fact: The controversy surrounding the origin of COVID-19 generated heated debate among the superpowers. The mere fact that the epidemic was first reported in Wuhan, Hubei province, alone does not necessarily mean that it is humanly prepared bio-weapon in China. Dr. Lau and colleagues concluded "there is currently no evidence showing that SARS-CoV-2 is an artificial recombinant." The public health scientists from the United States, Europe, and Asia further substantiated in The Lancet: “We stand together to strongly condemn conspiracy theories suggesting that Covid-19 does not have a natural origin”.

Myth 2: It is transmitted to humans through bats and Wuhan market sea food.

Fact: Coronaviruses is a large group of family affecting different species of animals. According to CDC, it can rarely pass between humans and animals as in MERS and SARS. Initially, this novel coronavirus was thought to have started in wet market of Wuhan, suggesting animal-to-human transmission. But a large number of people diagnosed with the virus

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didn’t have exposure to the wet markets, so it is clear that virus has person to person transmission. "Although the Wuhan market was initially suspected to be the epicenter of the epidemic, the immediate source remains elusive," Dr. Lau and colleagues wrote. The possibility that new combination of virus has developed, if bats carrying corona virus were mixed in the Wuhan market. However, no animal samples from the market were reported to be positive, neither the first identified case in a human nor other early patients had visited the market, all these suggesting the possibility of an alternative source. The plausible explanation could be that humans packed live bats in unhygienic conditions with other wild species which might have served as intermediate hosts. This may be the reason at Wuhan wet market where many experts believe COVID-19 emerged.

Myth 3: Extremes of temperature can kill the Virus.
**Fact:** There is no proven correlation between temperature variation and corona spread. In a French research, heating the virus at 56°C-30min and 60°C-60min did not significantly affect the number of detectable RNA copies.

According to report of The National Academies of Science, warm weather in summer would have little impact on the spread of coronavirus in the United States. There is some evidence that it may transmit less efficiently in warmer temperature, but it still be rendered as insignificant because of lack of host immunity globally.

The WHO also states that there is no reason to believe cold weather can kill the new coronavirus.

Myth 4: It targets only older people, not children.
**Fact:** SARS-CoV-2 can infect people of any age. Children are usually mildly affected, and it has affected 2% of children under the age of 18 years worldwide. Older people and those with comorbid conditions like asthma, diabetes, cardiac disease and compromised immune system have serious complications.

Myth 5: It is transmitted through urine and faeces.
**Fact:** Coronavirus is present in faeces. However, there are no reports of feco-oral transmission of the COVID-19 virus to date. According to Prof. John Edmunds, from the London School of Hygiene & Tropical Medicine. Every time we swallow, we swallow mucus from our upper respiratory tract. In fact, it is an important defensive mechanism which sweeps viruses and bacteria down into our gut where they are denatured in the acidic environment of our stomach and when excreted in stool no more infectious to others.

Myth 6: It is transmitted through house flies and mosquito bites.
**Fact:** The existing evidence does not favor its transmission through houseflies and tick bites. According to WHO and Centre for Disease Control and Prevention it is not an air born disease and spreads by respiratory droplets.

Myth 7: It is transmitted by 5G Radiations.
**Fact:** In The Guardian, mobile network representative stated that they have noticed cases of vandals setting fire to mobile masts, disrupting critical infrastructure, and spreading false information suggesting a connection between 5G and the COVID-19 pandemic. Ahmad et al reported that it is just a conspiracy theory and has no link to reality of coronavirus transmission by 5G radiations.

Myth 8: Home remedies help in prevention and elimination of coronavirus.
**Fact:** There is no evidence that eating garlic, ginger and onion prevent or cure novel coronavirus. Garlic has different antimicrobial properties. Food can only boost immune system to combat the disease.

Drinking hot water every 15 minutes, taking lemon, honey, hot pepper soup, and gargling with warm salty water provide soothing effect on one’s throat rather than elimination of virus. There is no role of hot baths in prevention of corona virus. Rather hot baths can damage and burn the skin.

There is limited evidence that regular rinsing of nose with saline help people recover quickly from common cold but currently no scientific evidence exists that it can ward off novel coronavirus.

Myth 9- Holding breath for 10 seconds is diagnostic test for coronavirus.
**Fact:** No evidence exists to prove this breathing exercise in diagnosis of coronavirus. It is diagnosed by lab test.

Myth 10- Thermal scanners can diagnose coronavirus infection.
**Fact:** Thermal guns only detect temperature which can be raised due to other infections as well. It alone necessarily cannot diagnose coronavirus infection.

Myth 11- Overseas ordering and buying can spread
nacterial coronavirus.

**FACT:** According to WHO, humidity, temperature changes and shipping conditions make it difficult for viruses to survive longer on objects such as letters or packages, so there is very low risk of spreading coronavirus from products or packaging that are shipped over a period of days or weeks.9

**Myth 12:** Drinking methanol, ethanol or gargling with bleach can prevent coronavirus infection.

**Fact:** Drinking alcohol is injurious to health and disinfecting the nose or mouth with bleach is also harmful. All these measures do not prevent from novel coronavirus infection.9

**Myth 13:** Coronavirus infection is a simple flu.

**Fact:** Coronavirus is far deadlier than flu. Simple flu can infect 0.1% of population and it is infecting about 3-4%. In severe cases, patients need hospitalization for ICU care.17

**Myth 14:** Once infected with coronavirus, infection cannot resolve.

**Fact:** Most people infected with novel coronavirus had mild signs and symptoms and recovered with symptomatic care.

**Myth 15:** Chloroquine and macrolides can be used for prevention and treatment of coronavirus.

**Fact:** Chloroquine and hydroxychloroquine are considered as immunomodulatory agents. In a non-randomized trial, Gautret et al. reported that hydroxychloroquine has shown significant viral load reduction until viral disappearance and this effect was enhanced by the macrolide azithromycin.18 The Lancet stated that neither Hydroxychloroquine nor chloroquine benefitted patients of COVID-19 and even raised the risk of death due to arrhythmias or problems in heart rhythm. But this study has been retracted, so use of these drugs need further research.19

**Myth 16:** Pneumonia and H Influenza vaccines can protect from coronavirus.

**Fact:** Pneumococcal and H Influenza vaccines provide no protection against novel coronavirus. This virus is new and should have its own vaccine. The process of new vaccine production is under research and very well supported by WHO.9

**Myth 17:** Antibiotics prevent or cure novel coronavirus infection.

**Fact:** Antibiotics can cure bacterial infections; they have no role in prevention or treatment of this viral infection. Though, empirical antibiotics can be useful for coexisting bacterial infections.9

**Myth 18:** Ibuprofen use can worsen the novel corona infection.

**Fact:** Initially WHO warned against the use of Ibuprofen use but later took it back as no evidence showed any harm with the use of ibuprofen and other anti-inflammatory pain killers.9

**Myth 19:** ACE inhibitors worsen novel corona-virus infection.

**Fact:** American College of Cardiology, American Heart Association, and Heart Failure Society of America suggest that people should not stop taking angiotensin converting enzyme (ACE) inhibitors and angiotensin receptor blockers (ARBs), as these drugs don’t worsen the novel coronavirus infection.20 The only effective preventive strategies recommended by WHO and Centre for Disease Prevention and Control are:

- Frequent hand washing with soap and water for 20 seconds or rubbing with alcohol-based sanitizer.
- Avoid touching eyes, nose, and mouth.
- Practice of physical interindividual distancing of about 3 feet.
- Avoid going in crowded places.
- Observe good respiratory hygiene, cover mouth and nose with bent elbow or tissue with cough or sneeze and dispose off the used tissue immediately and wash your hands.
- Stay home and self-isolate even with minor symptoms such as cough, headache, mild fever, until you recover. Have someone bring you supplies. If you need to leave your house, wear a mask to avoid infecting others.
- Healthcare workers caring for infected individuals should practice contact and airborne precautions which include PPE (N95 or FFP3 masks, eye protection, gowns, and gloves) to prevent transmission of the pathogen.

In conclusion, as health care professionals it is our moral obligation to resolve these misconceptions and create public awareness based on the scientific evidence. This is the only way forward to curb the disease spread and harmful practices among the public. The existing evidence holds that strict observation of preventive measures can protect from novel coronavirus and to date only supportive treatment is available till vaccine is produced.9

**Conflict of Interest:** None

**References**


4. Corona Virus Disease 2019 (COVID 19): Centre for disease control and prevention


13. Expert comment about whether coronavirus can be spread via urine or faeces, 5 March 2020, Science Media Centre.


Authors Contribution
MS: Article concept, design and draft writing.
CS: Draft Writing
HS: Literature Search
AN: Draft Review
HS: Final Approval of Draft and all review