

2019 novel coronavirus infection

Simple gestures can save your life

DR TILOVATUL KHONDAKER

Viruses are the bad news wrapped in protein coat. When a new strain of coronavirus has infected humans for the very first time in Wuhan, China in late 2019, it was not much of a surprise. Thanks to its' predecessors, severe acute respiratory syndrome coronavirus (SARS-CoV) and Middle East respiratory syndrome coronavirus (MERS-CoV), both being the deadly coronaviruses causing intense mortality in 2003 and 2012 respectively. It was known how these two novel coronaviruses reached humans, from camel and civet cats but to date, the source of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) that causes the coronavirus disease (COVID-19) is yet to be discovered. Let it be the snake or bat, 2019 novel coronavirus is equally threatening as the other viruses.

After the identification of three confirmatory COVID-19 cases in Bangladesh, we are nothing but stuck with the worst fear as we live in one of the densely populated countries in the world, and have all the reasons to be worried about, starting from our hygiene practice to cultural norms. This novel coronavirus causes respiratory symptoms, for instance, fever, cough, shortness of breath, like all other flu viruses but being entirely new to human



species it also is responsible for fatal pneumonia leading to respiratory failure, even death in several cases. Experts believe sneezing, body ache, throat ache are frequent symptoms in common cold and are clinically distinguishing features of the common cold from COVID-19 cases, whereas, common cold is more likely than COVID-19 when there is presence of headache, sneezing, nasal blockage, runny

nose and absence of fever.

A suspected COVID-19 patient has crucial tasks to follow for the sake of his family and countrymen. It is a virus that spreads through respiratory droplets, which means by its' property, it forms a tiny molecule named droplet following excreted from the patient's nose, mouth or hand and transmit thereby. It can remain infectious especially in the next several hours.

To save ourselves from this deadly acellular organism, we must keep the hygiene practice a go. Namely, keeping our hands clean, avoid touching the face, eyes and nose with contaminated hands, sneezing within elbow crease and self-quarantine ourselves if there are fever, cough and respiratory distress.

Like all other viral illnesses, this virus also exhausts in the fight with our immune system,

so consuming antioxidants rich foods will boost our immune health and ensure our survival a bit more than usual. So, it is time for squeezing lemons and sipping on herbal tea instead of getting panicked.

As the virus has just entered the country, timely and firm preparation can limit the transmission of it in the community. It is not that we have entered into an emergency and should refrain from the usual activities, rather we must try our best to avoid crowded places, wearing a mask if you are coughing or sneezing especially in public transport or in crowded places, keeping the hands clean with soap water or alcohol-based hand sanitisers frequently, keeping door knobs, elevator button and cellphone surfaces clean and disinfected.

Even if we get infected, we can take care of ourselves in most cases just like the way we do in common flu, like having simple analgesics, drinking plenty of fluids and rest. Only a few of us may need hospital admission. This is the time for everyone to be highly precautionous, adequately sensible to oneself and others.

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HEALTH bulletin



Topical oxygen therapy for diabetic foot ulcers?

Hyperbaric oxygen therapy (i.e., breathing 100% oxygen under high atmospheric pressure) has shown mixed results in studies of diabetic foot ulcers. Now, in a multicentre U.S. and European trial, investigators examined whether topical oxygen promotes healing of such ulcers.

Seventy-three patients with diabetic foot ulcers were randomised to receive pressurised oxygen topically (administered through a chamber placed over the extremity) or sham treatment (same device, delivering non-pressurised room air). Enrollment criteria included ulcer size of 1 to 20 cm², at least 1 month of unsuccessful treatment, and absence of severe limb ischaemia. Patients treated themselves at home, 5 times weekly, for 90 minutes per session. At 12 weeks, complete ulcer healing occurred in 42% of intervention patients and in 14% of sham-control patients (P=0.01). At 1 year, rates of complete healing remained greater in the intervention group (56% vs. 27%; P=0.01).

The results of this trial (which was funded by the maker of the device) are quite impressive, but a non-industry-supported trial to corroborate the findings would be welcome. The device used in the trial is available commercially, but the cost of a course of treatment is unclear.

Why quarantine is important to put brakes on COVID-19 outbreak?

DR ZUBAIR KHALED HUQ

There are public health tools that could slow down the spread of the coronavirus disease 2019 (COVID-19) outbreak, like washing hands with soap, not touching the face, staying away from patients etc. There are several other broad public health strategies used to put the brakes on a viral outbreak. The most important and sometimes confusing ones are isolation of sick patients and tracing their contacts, quarantine, and social distancing.

Isolation is separating those with confirmed infections from other people so that they can get better without infecting anyone else. Quarantine is restricting the movement of or isolating people who may have been exposed to the infection but not sick yet. Social distancing refers to an approach meant to restrict people from gathering in large crowds to slow the spread of an infection. All of these methods can be used to prevent an outbreak, to varying degrees of effectiveness, and result in varying degrees of hardship for individuals.

If you can identify everyone who is infected and safely isolate them from others while they are in treatment, the outbreak can be stopped. Isolation of the sick may help slow the spread of the current COVID-19 outbreak. People with COVID-19 may be spreading the virus before they even have symptoms.

A key to making isolation work is to pair it with contact tracing. While sick patients are in isolation,

public health workers can figure out all the people those patients were in contact with. This way they can find a patient's source of the disease and potentially isolate them as well as identify people who are at risk of contracting the disease and place them under isolation or quarantine.

In quarantine, people who may have been exposed to an infection are asked to remain at home or in another place isolated from other people. Quarantines can target just individuals who have travelled to affected countries, or could end up



involving large groups of people. Governments have the power to order mass quarantines who may have been exposed in order to prevent them from spreading the illness before they start experiencing symptoms.

Social distancing, isolation and quarantine depend on public health officials' ability to detect cases or possible exposure to infection. Unlike quarantine

and isolation, social distancing orders typically apply to whole communities and not specific individuals. These measures include postponing or cancelling mass gatherings like sporting events, concerts, religious gatherings, mass meetings etc.

How fast and far COVID-19 will spread, how many people will get sick, are still unknown. We may expect a wave of coronavirus in Bangladesh with community transmissions likely to increase. No proven specific treatment or anti-

viral drug for COVID-19 is currently available.

Ultimately, the government has the responsibility to ensure the health of its citizens and to control the spread of infectious diseases. This can only be done by having provisions or policies for adequate health and social measures.

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BREAKTHROUGH

A second patient has been cured of HIV!



A study of the second HIV patient to undergo successful stem cell transplantation from donors with a HIV-resistant gene, finds that there was no active viral infection in the patient's blood 30 months after they stopped anti-retroviral therapy, according to a case report published in *The Lancet HIV* journal.

Although there was no active viral infection in the patient's body, remnants of integrated HIV-1 DNA remained in tissue samples, which were also found in the first patient to be cured of HIV. The authors suggest that these can be regarded as so-called 'fossils', as they are unlikely to be capable of reproducing the virus.

Lead author on the study, Professor Ravindra Kumar Gupta, University of Cambridge, UK, says: "We propose that these results represent the second ever case of a patient to be cured of HIV. It is important to note that this curative treatment is high-risk, and only used as a last resort for patients with HIV who also have life-threatening haematological malignancies. Therefore, this is not a treatment that would be offered widely to patients with HIV who are on successful antiretroviral treatment."

While most HIV patients can manage the virus with current treatment options and have the possibility of living a long and healthy life, experimental research of this kind following patients who have undergone high-risk, last-resort curative treatments, can provide insight into how a more widely applicable cure might be developed in the future.

Comparing to the treatment used on the 1st Berlin patient, the authors highlight that their case study of the 2nd London patient represents a step towards a less intensive treatment approach, showing that the long-term remission of HIV can be achieved using reduced intensity drug regimens, with one stem cell transplant (rather than two) and without total body irradiation.

However, being only the second reported patient to undergo this experimental treatment successfully, the authors note that that the London patient will need continued monitoring.



Over 20m patients with kidney diseases, less than 10% can afford treatment

A roundtable discussion titled 'Kidney Health for All: Obstacle and Prevention' was organised on March 12, 2020, to mark the World Kidney Day by the Kidney Awareness Monitoring and Prevention Society (KAMPS) in the capital, says a press release.

Renowned nephrologist Prof Dr M A Samad, Chairman of KAMPS presented the keynote paper. Prof Samad said, "Bangladesh has almost 20 million patients with kidney diseases. The treatment is so expensive that barely 10 per cent of the patients can afford it. At least 60 per cent of kidney failures can be prevented through awareness and regular screening."

The speakers at the discussion urged on increasing social awareness and mass advocacy to educate people on how to avoid kidney diseases.

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World oral health day 20th March

You can practice good oral hygiene by always brushing your teeth twice a day with a fluoride toothpaste, cleaning between your teeth once a day with floss or another interdental cleaner, replacing your toothbrush every three or four months and by eating a balanced diet and limiting between-meal snacks. Don't forget to schedule regular dental check-ups to **keep your smile** and yourself, healthy.



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