

Chloroquine, zinc tested to treat COVID-19 infection

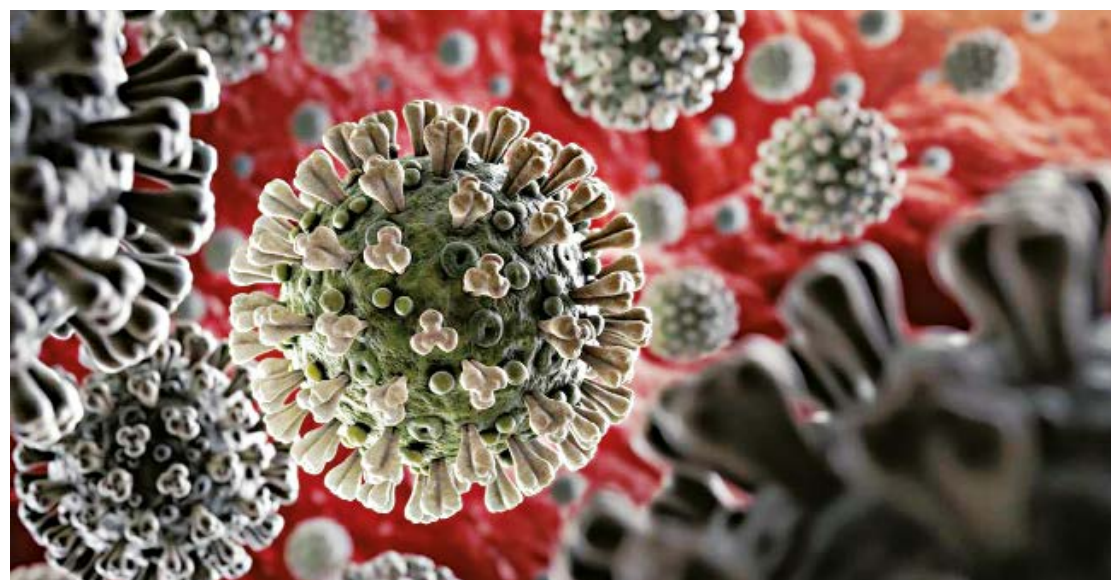
STAR HEALTH REPORT

In the United States and Europe, a handful of clinical trials have begun to test ways to keep healthcare workers and other vulnerable people safe from coronavirus disease (COVID-19).

Most are testing drugs called chloroquine or hydroxychloroquine that have long been used to prevent and treat malaria, and also as a therapy against rheumatoid arthritis and lupus. The hope is that, given before infection or early in the course of the disease, the drugs will protect someone against infection and illness from the virus, or, if they do, will ensure that their case is mild. But whether these drugs will help, hurt or do nothing remains an open question.

The virus that causes COVID-19 uses a backdoor to enter the cell. As it enters, it is exposed to an acidic, vinegar-like environment, which is actually needed for the virus to get all the way inside. Hydroxychloroquine, metaphorically keeps the cap on the vinegar, Greene says, preventing acidification. Thus, there is a scientific rationale for how this drug might exert an antiviral effect.

Mahir Ozmen, a professor of surgery at the Istinye University,



School of Medicine in Istanbul, Turkey, says he thinks the best way to use chloroquine is in combination with zinc and vitamins C and D. He is running a clinical trial, testing to see whether this combination protects health care workers and their immediate families – including his own.

Ozmen, who is collaborating with a chest medicine specialist, an intensive care physician, and two infectious disease experts, says he intended to include only 80 participants, but 98 quickly

volunteered. He began providing prophylactic therapy 2 weeks ago, and expects to complete the trial by July.

Ozmen says, "Hydroxychloroquine helps the zinc get inside the infected cells to destroy the virus, and vitamins A and D support immune function". He gives volunteers a low dose of hydroxychloroquine every 3 weeks, and a vitamin tablet every day – or every other day for people prone to kidney stones. At the end of the trial,

each participant will be checked for antibodies to COVID-19, suggesting an infection, whether they realised it or not. This kind of prophylaxis will give us the time to develop a vaccine that will offer protection to everyone.

In perhaps the fastest-moving, large prophylaxis trial, researchers at Duke University are leading a US\$ 50 million collaboration across hundreds of American healthcare systems, which will test 15,000 volunteers. Half the health care workers will take hydroxychloroquine, and half a

placebo. Other drugs could be added to the study if they prove promising for preventing or lessening infection, says Adrian Hernandez, the trial's principle investigator.

In France, researchers are running a trial with 1,200 healthcare workers to test prophylactic use of hydroxychloroquine or a combination of two HIV drugs, Lopinavir and Ritonavir, which failed as a treatment in people with severe COVID-19 infections but may work as prevention. It is expected to take 6 months.

In a 40,000-person trial led by the University of Oxford in England, participants in Asia will receive chloroquine or a placebo, and in Europe, hydroxychloroquine or a placebo. That trial is expected to take a year.

Robert Salata, chairman of the department of medicine at UH Cleveland Medical Centre, is including 4,500 patients in his trial of an antiseptic that healthcare workers will spray into their mouth three times a day. The antiseptic, called ARMS-I, made by ARMS Pharmaceutical of Cleveland, is already present in lower concentrations in some mouthwashes, he says.

Source: WebMD

CHILDHOOD CANCER

11 million children are expected to die from cancer

Improving care for children with cancer worldwide will bring a triple return on investment and prevent millions of needless deaths, according to a new commission report published recently by The Lancet Oncology entitled Sustainable Care for Children with Cancer.

Without additional investment in childhood cancer care, new estimates produced for the report reveal that over 11 million children aged 14 years and younger are expected to die from cancer over the next 30 years worldwide. The vast majority of those—more than 9 million deaths (84%)—will be in low-income and lower-middle-income countries.

The landmark report synthesises existing evidence with new modelling and economic analyses to demonstrate that—with investment in expanding worldwide coverage of achievable cost-effective interventions and strengthening health systems—millions of children's lives could be saved, with huge economic benefits that far exceed the costs.

This report provides compelling evidence that improving outcomes for children with cancer is both feasible and a highly cost-effective investment for all countries rich and poor alike. Expanding access to achievable diagnostics, treatment, and supportive care, alongside strengthening health systems more widely, could prevent more than 6 million child deaths and bring almost US\$2 trillion in economic benefits over the next 30 years. The time is right for a global push to expand coverage of care for children with cancer.



HEALTH bulletin



Pregestational diabetes profoundly affects perinatal outcomes

Nearly 3% of reproductive-aged U.S. women have type 1 or type 2 diabetes and 6% of pregnancies are complicated by gestational diabetes. In addition, diabetes diagnosed before pregnancy (pregestational diabetes) is a well-known risk factor for poor pregnancy outcomes, including birth defects.

Assessing risk for individual birth defects related to diabetes has been challenging because of the low incidence of specific anomalies. Therefore, investigators examined data on 31,000 pregnancies affected by 50 distinct foetal anomalies in the National Birth Defects Prevention Study (NBDPS) from 1997 through 2011 to assess more accurately the association of an isolated defect with pregestational or gestational diabetes.

Statistically significant associations (many very strong) with pregestational diabetes were noted for 22 of 26 non cardiac anomalies, and for all 24 of the cardiac anomalies assessed.

These strong associations underscore the detrimental impact on pregnancies of pregestational diabetes, a condition that is dramatically growing in prevalence. Ideally, women should modify their lifestyles to lower their risk for developing type 2 diabetes — and preconception care should be encouraged as it has been associated with a 20% decrease in haemoglobin A1c levels and a 75% decrease in birth defects.

COVID-19: What should we do?

In Conversation with Prof. Samir Kumar Saha

STAR HEALTH DESK

In the current global pandemic scenario of coronavirus disease (COVID-19) Prof Samir Kumar Saha, Head of the Department of Microbiology at Dhaka Shishu Hospital and Executive Director of Child Health Research Foundation (CHRF) shared his views with the Star Health and shed light on the direction of handling the global pandemic in the context of Bangladesh.

When asked about the virus Prof Saha said that we know very little about this virus. New things are getting unfolded every day. Coronavirus was there in this world for many years. In the past, coronavirus caused only minor sickness like sneezing and coughing etc. But now it is causing severe respiratory infections. The virus has evolved going through different animals like birds, especially bats and some other hosts.

Bangladesh is possibly on the brink of a disaster. Maybe a very big wave is coming at us, and we do not know what is going to happen. The next few weeks will be very critical because the viral infection has moved to the community level. We are not sure how it will behave.

We could not screen a large number of cases in Bangladesh because we did not have the arrangements to do the tests. We could not involve more laboratories in time to perform the tests. If we could have done something about it a little earlier, it would have been much more effective in measuring the situation.



Prof Samir Kumar Saha, Head of the Department of Microbiology at Dhaka Shishu Hospital and Executive Director of Child Health Research Foundation (CHRF)

Prof Saha thinks that there should be more detection of cases and immediately they should be isolated. If it is not done the nation might be at risk. It depends on how disciplined we are, and how we are maintaining everything. We need to follow the social distancing, quarantines and all the other instructions that are being placed by the government. If we do not follow that we could face a major problem very difficult to handle.

About the development of a vaccine for COVID-19, Prof Saha says globally there are

many pharmaceuticals, research organisations and universities trying to develop a vaccine but the progress is not known. We are not sure whether there will be a vaccine in a short time. Even if there is any development of the vaccine within the next six months, it will probably take at least a year to come to us because the discovery of the vaccine and then producing it in bulk is not very simple. It requires a lot of time and the involvement of many industries to produce millions of doses.

About the psychosocial consequence of the COVID-19 pandemic, Prof Saha says, "This global pandemic teaches us that human beings cannot live alone. They should live together and they should help each other - that is the only way they can survive. No matter how strong we are, wherever we live in this world, we cannot get protected. We should realise this and try to be a true human being with compassion for each other."



Scan the QR code to listen to the full interview of Prof Samir Saha.



WHO lists two COVID-19 tests for emergency use

The World Health Organisation (WHO) has listed the first two diagnostic tests for emergency use during the coronavirus disease (COVID-19) pandemic. The move should help increase access to quality-assured, accurate tests for the disease. It also means that the tests can now be supplied by the United Nations and other procurement agencies supporting the COVID-19 response.

Both in vitro diagnostics, the tests are genisig Real-Time PCR Coronavirus (COVID-19) and cobas SARS-CoV-2 Qualitative assay for use on the cobas® 6800/8800 Systems.

The Emergency Use Listing procedure (EUL) was established to expedite the availability of diagnostics needed in public health emergency situations. It is intended to help procurement agencies and countries navigate the large presence of different devices on the market and, by assessing them, provides assurance of the products' quality and performance.

The genisig Real-Time PCR Coronavirus (COVID-19) (Primerdesign, United Kingdom) is an open system more suitable for laboratories with moderate sample testing capacity, while the cobas® SARS-CoV-2 for use on the cobas® 6800/8800 Systems (Roche, United States of America) is a closed system assay for larger laboratories.

Source: World Health Organisation



HOW TO HOME QUARANTINE

The home quarantined person should:



Stay in a well-ventilated single-room preferably with an attached toilet



Needs to stay away from elderly people, pregnant women, children



Restrict his/her movement within the house



Under no circumstances attend any social/religious gathering



Wash hand frequently with soap and water or with alcohol-based sanitizer



Avoid sharing household items like dishes, glasses, cups, utensils, towels, bedding



Wear a surgical mask at all time. The mask should be changed every 8-8 hours

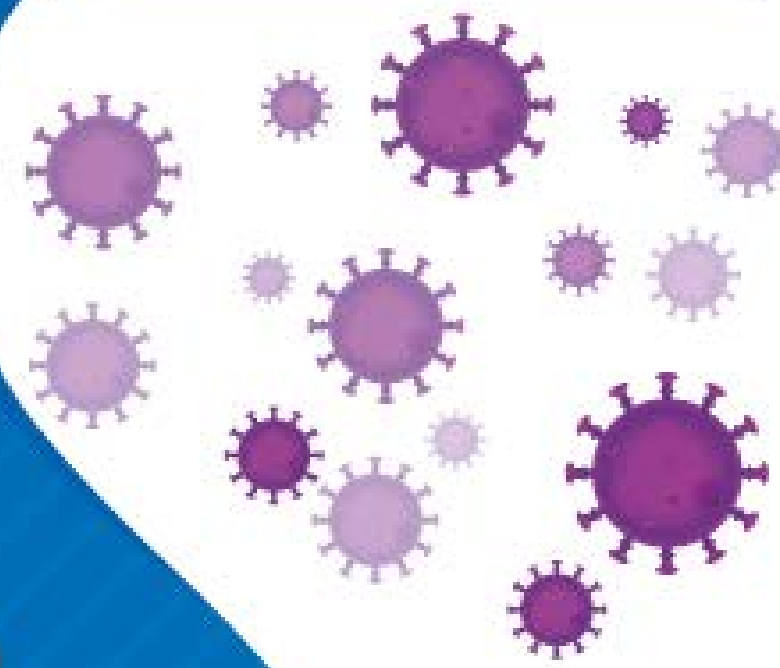


Dispose off used mask in a closed bin and bin should also be handled responsibly



If symptoms appear, he/she should immediately inform the nearest health centre

COVID-19 OUTBREAK



In Search of Excellence