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Baby born with antibodies

Singapore studies COVID-19 pregnancy puzzle after baby born with antibodies

Singapore studies COVID-19 pregnancy puzzle after baby born with antibodies (The Tribune: 20201203)

https://www.tribuneindia.com/news/health/singapore-studies-covid-19-pregnancy-puzzle-after-baby-born-with-antibodies-177991

Doctors are studying the impact of COVID-19 on pregnant women and their unborn babies in Singapore, where an infant delivered by an infected mother earlier this month had antibodies against the virus but did not carry the disease.

The ongoing study among the city-state's public hospitals adds to international efforts to better understand whether the infection or antibodies can be transferred during pregnancy, and if the latter offers an effective shield against the virus.

The World Health Organisation says while some pregnant women have an increased risk of developing severe COVID-19, it is not yet known whether an infected pregnant woman can pass the virus to her foetus or baby during pregnancy or delivery.

A Singaporean woman, infected with the coronavirus in March when she was pregnant, told local newspaper the Straits Times that doctors said her infant son had antibodies against the virus but was born without the infection.

"It is still unknown whether the presence of these antibodies in a newborn baby confers a degree of protection against COVID-19 infection, much less the duration of protection," said Tan Hak Koon, chairman of the Obstetrics and Gynaecology division at KK Women's and Children's Hospital.

KK is one of the hospitals involved in the study of infected pregnant women in Singapore, details of which surfaced after the case of the baby born with antibodies was made public.

The National University Hospital, another hospital involved, said the study looks at the effects of COVID-19 on pregnant women, their foetus and outcomes after delivery.

Doctors in China reported the detection and decline over time of COVID-19 antibodies in babies born to women with the coronavirus disease, according to an article published in October in the journal Emerging Infectious Diseases.

While there is evidence that transmission during pregnancy is rare, a small study in Italy suggested that it is possible, according to research published in the Nature journal in October.

Other studies have shown COVID-19 antibodies can be passed to a child via breastfeeding, while KK's Tan said there was evidence they could pass during pregnancy through the placenta to the baby.

Paul Tambyah, one of city-state's leading disease experts, said it was encouraging that antibodies were present in the Singapore baby months after the mother's infection, adding to broader evidence that they offer some protection from the virus.

"Worldwide there have been millions of people infected, including probably thousands of pregnant women, with very few reports of infections in very young babies. This suggests that there might be some protection from maternal antibodies and breast feeding," said Tambyah, President of the Asia Pacific Society of Clinical Microbiology and Infection.

Cancer survivors

Cancer survivors at higher risk of dying from flu: Study (The Tribune: 20201203)

Likely to be at higher risk of severe Covid-19 outcomes

https://www.tribuneindia.com/news/health/cancer-survivors-at-higher-risk-of-dying-from-flu-study-179008

Survivors from a wide range of cancers are more likely than people in the general population to be hospitalised or die from seasonal influenza even several years after their cancer diagnosis, warn researchers, including one of Indian-origin.

The study, published in the journal EClinicalMedicine, suggests that cancer survivors are also likely to be at higher risk of severe Covid-19 outcomes.

The research team from the London School of Hygiene & Tropical Medicine (LSHTM), analysed medical records from 1990 to 2014 of more than 630,000 people in the UK, including over 100,000 survivors of a range of cancers.

Comparing the rates of influenza hospitalisation and death between cancer survivors and the cancer-free population, they found that the risk of these outcomes was more than nine times higher in survivors from lymphomas, leukaemia, and multiple myeloma, compared to those with no prior cancer.

Crucially, this raised risk persisted for at least 10 years after cancer diagnosis.

Despite the risks being raised compared to the general population, the absolute risks of developing severe flu were still relatively low, with about 1 in 1000 survivors of these types of cancer hospitalised with flu each year.

Survivors from other types of cancer also had more than double the risk of severe influenza outcomes for up to five years from diagnosis.

These findings persisted even after accounting for other suspected risk factors such as old age, smoking, socioeconomic status, body mass index and other illnesses.

The researchers also found that cancer survivors were more likely to have other diseases that are associated with increased risk of severe Covid-19 outcomes, such as heart disease, diabetes, respiratory disease and kidney disease.

"These findings have an immediate relevance as we enter the winter period: we have a flu vaccine available, and the likelihood of a Covid-19 vaccine in the near future," said study author Krishnan Bhaskaran from LSHTM.

"Understanding how vaccination should be prioritised to protect the most vulnerable will be crucial over the next few months," Bhaskaran noted. IANS

Novel coronavirus infections

Novel coronavirus infections may have been present in US as early as December: Study
The novel coronavirus may have been introduced into the US as early as December 13 to 16, 2019(The Tribune: 20201203)

https://www.tribuneindia.com/news/health/novel-coronavirus-infections-may-have-been-present-in-us-as-early-as-december-study-178904

Novel coronavirus infections may have been present in US as early as December: Study
The novel coronavirus may have been introduced into the US as early as December 13 to 16, 2019. Reuters

The novel coronavirus may have been introduced into the US as early as December 13 to 16, 2019, suggests a study which assessed archived samples from routine blood donations collected by the American Red Cross.

While the first confirmed case of COVID-19 in the US was identified on January 19, 2020, the scientists, including Sridhar V Basavaraju from the Centers for Disease Control and Prevention (CDC) in the US, noted that antibodies reactive against the coronavirus were detected in 106 of the 7,389 specimens.

According to the research, published in the journal Clinical Infectious Diseases, 84 of the samples specifically had neutralising activity against the spike protein of the SARS-CoV-2 virus, which enables it to enter host cells.

"The presence of these serum antibodies indicate that isolated SARS-CoV-2 infections may have occurred in the western portion of the US earlier than previously recognised, or that a small portion of the population may have pre-existing antibodies that bind SARS-CoV-2," the researchers wrote in the study.

Since some parts of SARS-CoV-2, such as the S2 subunit of its spike protein, is more conserved across human coronaviruses, they said the findings raised questions on whether the detection of reactive antibodies indicates actual infections with the novel coronavirus earlier than recognised.

In order to overcome this doubt, the scientists performed more specific tests of the samples against the S1 subunit of the novel coronavirus.

"The S1 subunit has been reported to be a more specific antigen for SARS-CoV-2 serologic diagnosis than the whole S protein," they explained in the study.

Citing recent research, the scientists also noted that the sera from patients with confirmed infection with human coronaviruses did not contain IgM or IgA antibodies.

"Therefore, the presence of IgM or IgA antibodies and S1-specific binding activity may distinguish antibodies to SARS-CoV-2 from antibodies to human common coronaviruses," they added.

On further analysis, the researchers found that 84 of the 90 reactive sera had neutralising activity against the SARS-CoV-2 virus, and 39 had both IgG and IgM SARS-CoV-2 S-specific antibodies.

They said two sera had surrogate neutralisation activities, and one had SARS-CoV-2 S1-specific antibodies.

Based on the analysis, the scientists said: "at least some of the reactive blood donor sera could be due to prior SARS-CoV-2 infection." "The findings of this report suggest that SARS-CoV-2 infections may have been present in the US in December 2019, earlier than previously recognised," the researchers wrote in the study.

However, scientists believe further studies involving retrospective analyses of human specimens with molecular or serologic methods are necessary to further corroborate the findings. PTI

COVID-19 pandemics

COVID-19 pandemic's long-term impact could lead to more new HIV infections, AIDS-related deaths: UN (The Tribune: 20201203)

https://www.tribuneindia.com/news/health/covid-19-pandemics-long-term-impact-could-lead-to-more-new-hiv-infections-aids-related-deaths-un-178498

Highlighting bright spots amid the crisis, the report said leadership, infrastructure and lessons of the HIV response are being leveraged to fight COVID-19

COVID-19 pandemic's long-term impact could lead to more new HIV infections, AIDS-related deaths: UN

The rapid spread of the novel coronavirus has created additional setbacks for the global AIDS response and there could be an estimated 123,000-293,000 additional new HIV infections and 69,000-148 000 additional AIDS-related deaths between 2020 and 2022 as a result of the COVID-19 pandemic's long-term impact, according to a new report.

The Joint United Nations Programme on HIV/AIDS (UNAIDS) said in its new report 'Prevailing against pandemics by putting people at the centre' that as COVID-19 pushes the AIDS response even further off track and the 2020 targets are missed, countries must learn from the lessons of underinvesting in health and to step up global action to end AIDS and other pandemics.

The UNAIDS is calling on countries to make far greater investments in global pandemic responses and adopt a new set of bold, ambitious but achievable HIV targets. If those targets are met, the world will be back on track to ending AIDS as a public health threat by 2030.

"The global AIDS response was off track before the COVID-19 pandemic hit, but the rapid spread of the coronavirus has created additional setbacks. Modelling of the pandemic's long-term impact on the HIV response shows that there could be an estimated 123,000 to 293,000 additional new HIV infections and 69,000 to 148,000 additional AIDS-related deaths between 2020 and 2022," the report said.

Executive Director of UNAIDS Winnie Byanyima lamented that the collective failure to invest sufficiently in comprehensive, rights-based, people-centred HIV responses has come at a terrible price.

"Implementing just the most politically palatable programmes will not turn the tide against COVID-19 or end AIDS. To get the global response back on track will require putting people first and tackling the inequalities on which epidemics thrive."

The report notes that in some low- and middle-income countries, health officials are bracing for a surge in new births due to interruptions to contraceptive access during the pandemic.

"In India, for example, it is estimated that COVID-19 interrupted contraceptive access for more than 25 million couples," it said.

The report said insufficient investment and action on HIV and other pandemics left the world exposed to COVID-19.

"Had health systems and social safety nets been even stronger, the world would have been better positioned to slow the spread of COVID-19 and withstand its impact," it said, adding that the COVID-19 has shown that investments in health save lives but also provide a foundation for strong economies. Health and HIV programmes must be fully funded, both in times of plenty and in times of economic crisis.

"No country can defeat these pandemics on its own," Byanyima said.

"A challenge of this magnitude can only be defeated by forging global solidarity, accepting a shared responsibility and mobilizing a response that leaves no one behind. We can do this by sharing the load and working together."

Highlighting bright spots amid the crisis, the report said leadership, infrastructure and lessons of the HIV response are being leveraged to fight COVID-19.

The HIV response has helped to ensure the continuity of services in the face of extraordinary challenges and the response by communities against COVID-19 has shown what can be achieved by working together.

In addition, the report underscores that the world must learn from the mistakes of the HIV response, when millions in developing countries died waiting for treatment. Even today, more than 12 million people still do not have access to HIV treatment and 1.7 million people became infected with HIV in 2019 because they did not have access to essential HIV services.

"Everyone has a right to health," which is why UNAIDS said it has been a leading advocate for a 'People's Vaccine' against COVID-19.

"Promising COVID-19 vaccines are emerging, but we must ensure that they are not the privilege of the rich. Therefore, UNAIDS and partners are calling on pharmaceutical companies to openly share their technology and know-how and to wave their intellectual property rights so that the world can produce successful vaccines at the huge scale and speed required to protect everyone," it said.

The report also noted that the number of countries criminalizing same-sex sexual relations has continued to decline in recent years, with Botswana and India removing previous prohibitions.

It said severe criminal penalties for same-sex sexual relations are associated with a 4.7 times higher risk of HIV infection compared with settings that lack such penalties.

The impact of decriminalization has been addressed in a study that modelled the effects of the criminalisation of sex work and found a roughly 40% reduction in new infections among sex workers over a 10-year period in Vancouver, Mombasa and Bellary, India, it said. — PTI

Coronavirus disease (Covid-19) infections (Hindustan Times: 20201203)

Why Capital may be on right track in Covid fight The third wave of coronavirus disease (Covid-19) infections in Delhi has started showing clear signs of receding with new cases dropping steadily over the past few weeks. The reduction in new infections has come hand-in-hand with a drop in the positivity rate and a significant improvement in testing, suggesting that the outbreak in Delhi may be relatively under control for the third time. Here are four factors that show Delhi is on the right track in its battle against the viral outbreak.

1 A distinct drop in the third wave

Delhi's Covid-19 case trajectory has shown three distinct surges. The first started in mid-June, and peaked when the seven-day average of daily cases, also known as the case trajectory, touched around 3,400 in the last week of June. This receded by the end of July when the trajectory dropped to around 1,000 daily cases. The second wave started at the end of August, rising until mid-September, when average daily cases touched 4,174 for the week ending September 17. This again dropped to 2,574 in the week ending October 9, before the onset of the third wave.

The third wave raged through most of October and November, leading to the largest surge of cases the capital has seen. The seven-day average of new cases peaked on November 14, when it touched 7,341 – the highest recorded so far. Since then, however, cases have started receding almost steadily (albeit with a slight bump on November 19 and 20).

2 Testing better and testing more

While Delhi has been ramping up Covid-19 tests from as early as September, a key concern was that most were rapid antigen tests, which are cheap, and produce results within 15 minutes, but unreliable. The proportion of reverse transcription-polymerase chain reaction (RT-PCR) tests, considered by experts to be the "gold-standard", dropped significantly. In the first 15 days of September, while overall testing rose, the share of RT-PCR tests nearly halved – from 32.3% in the week ending September 1 to 17% in the week ending September 16. This may have suppressed the real positivity rate because studies have shown that rapid antigen tests can miss as much as 50% of positive cases.

But in the past few weeks, this has not been the case. In the past week, 47.5% of all tests done in Delhi have been RT-PCR tests – the highest proportion ever recorded since the Delhi government started releasing a breakup of testing numbers in the last week of August.

Meanwhile, the rate of testing (both RT-PCR and antigen) is at the highest ever. On average, the Delhi government has conducted 64,148 tests every day in the last week. In fact, 78,949 samples were tested on Tuesday, another single-day testing record.

3 Dropping positivity rate a good sign

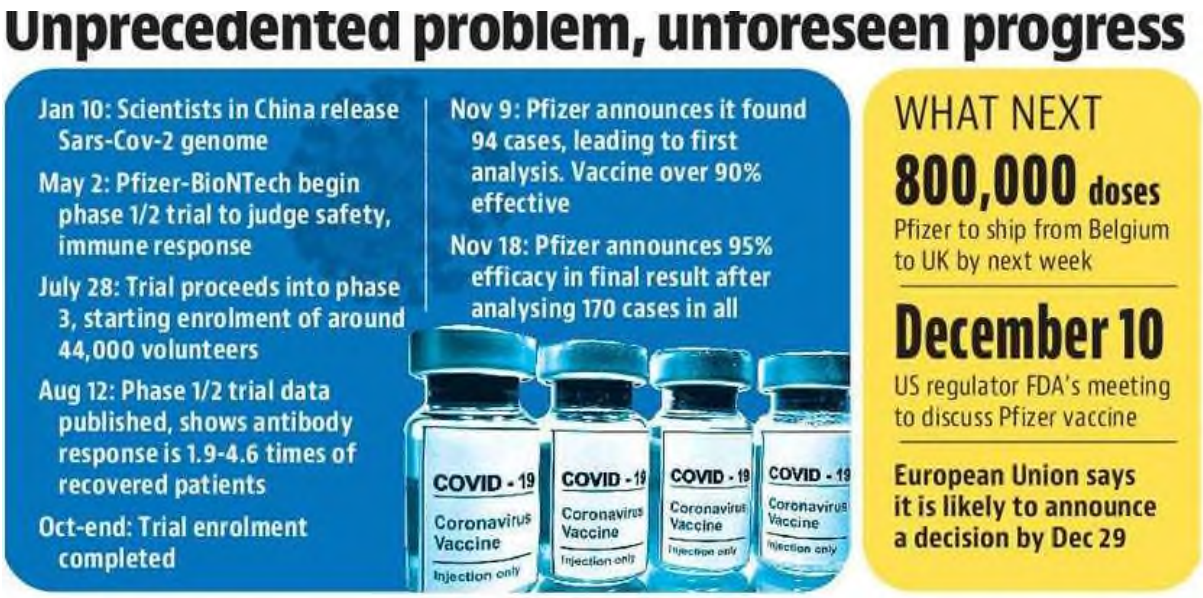
The positivity rate for Covid-19, meanwhile, has again started dropping. In the last week, 7.3% samples tested have come back positive (this is the lowest in over a month, since 7.2% for the week ending October 26). The proportion was 11.2% the week before, and 13.3% the week before that. On Wednesday, it was 5% — the lowest single-day positivity rate in nearly two months (it was 5% on October 6).

The positivity rate is a crucial metric as

Pfizer vaccine

In worlds first, Pfizer vaccine gets UK nodUK PM Boris Johnson says the approval is a global win and a ray of hope amid the gloom of Covid-19(Hindustan Times: 20201203)

https://epaper.hindustantimes.com/Home/ArticleView



The United Kingdom approved a coronavirus vaccine on Wednesday, becoming the first country to green-light an inoculation that has been clinically tested and paving the way for others in what could be the beginning of a long but inevitable end to the Covid-19 pandemic that has killed close to 1.5 million people and upended lives around the world.

Britain's regulator Medicines and Healthcare products Regulatory Agency (MHRA) granted emergency use approval to the vaccine developed by Pfizer-BioNTech, which separately said it expects to ship 800,000 doses from its facilities in Belgium as early as next week. The vaccine is likely to be first given to people in elderly care homes, particularly those above 80, and health care staff at hospitals.

"I'm really pleased to say that the UK is now one step closer to providing a safe and effective vaccine to help in the fight against Covid-19 – a virus that has affected each and every one of us in some way – and in helping to save lives," said June Raine, chief executive of the MHRA, assuring that "no corners were cut" while assessing the data.

"We have carried out a rigorous scientific assessment of all the available evidence of quality, safety and effectiveness. The public's safety has always been at the forefront of our minds – safety is our watchword," she added.

US company Pfizer and its German partner BioNTech were the first to announce that their mRNA platform vaccine has proven effective in preventing coronavirus infections. The results

from their final analysis were announced on November 18, when they said that a trial involving around 44,000 people showed the vaccine had a 95% efficacy rate.

At present, there is no confirmed information about whether Pfizer is in talks with authorities in India for regulatory approval or for purchase orders. “Right now we are in discussions with many governments around the world and remain committed to advance our dialogue and explore opportunities to make this vaccine available for use in India,” a company spokesperson told HT, adding that Pfizer will “supply this vaccine only through government contracts” for the duration of the pandemic.

India’s hopes of an early access to coronavirus vaccine rest on the candidate developed by Oxford-AstraZeneca, which has in an interim analysis showed an efficacy of 62-90%. The developers and its manufacturing partner, Pune’s Serum Institute of India said it will approach Indian authorities for an emergency approval by mid-December.

China and Russia have approved mass inoculations of some of their indigenously developed coronavirus vaccines, but scientists have questioned the wisdom of doing so before reading results from large scale clinical trials.

US pharma company Moderna on Monday said it too had reached the final analysis endpoint, showing the vaccine had an efficacy rate of 94%. The company has filed for an emergency approval with regulators in the United States, with a meeting on December 17 likely to yield to a decision.

It has also made rolling submissions to the MHRA beginning October 27, but the UK health secretary Matt Hancock told reporters recently that the shot is unlikely to be available till March since the company does not have a supply chain for the country.

UK’s MHRA also began an accelerated rolling review of the Oxford-AstraZeneca vaccine on November 2, the largest trials of which are being held in the country. This vaccine candidate, however, has not yet reached the endpoint -- the requisite number of infections before final efficacy numbers can be determined -- and final safety and efficacy assessments will have to wait till that is filed.

UK Prime Minister Boris Johnson touted the MHRA’s approval on Wednesday as a global win and a ray of hope amid the gloom of the pandemic that has hammered the world economy and upended normal life.

“It’s fantastic,” Johnson said. “The vaccine will begin to be made available across the UK from next week. It’s the protection of vaccines that will ultimately allow us to reclaim our lives and get the economy moving again.”

“We can see the way out, and we can see that by the spring we are going to be through this,” Hancock said on Sky News.

The approval, almost exactly a year since the coronavirus Sars-CoV-2 emerged in Wuhan, China, is a triumph for science, Pfizer CEO Albert Bourla and his German biotechnology partner BioNTech said.

Typically taking decades, the process of developing and approving a vaccine for the Sars-CoV-2, which causes Covid-19, has taken place at record speed – prompting scientists and experts to be concerned about the sanctity of the process.

The Pfizer inoculation went into human trials within five months of the virus being sequenced, late-stage trials were completed in under four months, and the approval was issued exactly a fortnight after the companies announced their final analysis. The data, the companies said in a

statement on Wednesday, was given to regulators as part of “rolling submissions” as trials progressed.

But the breakneck speed at which approval was given drew criticism from Brussels where, in an unusually blunt statement, the European Union’s drugs regulator said its longer procedure to approve vaccines was more appropriate as it was based on more evidence and required more checks.

Britain’s medicines regulator approved the vaccine in record time by doing a “rolling” concurrent analysis of data and the manufacturing process while Pfizer raced to conclude trials.

“With 450 people dying of COVID-19 infection every day in the UK, the benefits of rapid vaccine approval outweigh the potential risks,” said Andrew Hill, senior visiting research fellow in the Department of Pharmacology at the University of Liverpool, news agency Reuters reported.

The US Food and Drug Administration (FDA) is set to meet on December 10 to discuss whether to recommend emergency use authorisation of the Pfizer/BioNTech vaccine and the European Medicines Agency (EMA) said it could give emergency approval for the shot by December 29.

Covid-19: What you need to know today (Hindustan Times: 20201203)

https://epaper.hindustantimes.com/Home/ArticleView

The UK, which has a patchy record in managing the coronavirus disease — it was, after all, the first country to decide to bank on herd immunity before it realised the folly of the approach — became the third country (after China and Russia) and the first Western one to approve a vaccine for Covid-19.

China has approved three vaccines for emergency use; Russia, two. The UK’s regulatory approval for the mRNA vaccine developed by Pfizer Inc and BioNTech SE came on Wednesday, and the first shots of the vaccine are likely to be administered as early as the end of next week. The UK has said it is expecting deliveries of 800,000 of the 40 million doses of the vaccine it has ordered, next week. The Pfizer/BioNTech vaccine is a two-dose one that needs to be stored at Antarctic temperatures (which also means the vaccines can’t be moved around too much), which means the UK may well be able to vaccinate 400,000 of its people from the first delivery. Analysts expect the country to receive a few million doses of the vaccine this year; the shots will be administered by the UK’s National Health Service. The UK has firm agreements with a clutch of vaccine makers for around 350 million doses, which should be adequate for a country of 67 million.

Thus, a country that did almost everything wrong at the start of the pandemic has emerged at the vanguard of countries poised to get the better of the disease as the world enters 2021, a year that will be defined by vaccines and vaccination efforts, almost as much as 2020 was by the Sars-Cov-2 virus and Covid-19.

There’s been some confusion over India’s own vaccine plans, which too have gathered steam — the country is betting on the Astra Zeneca/Oxford vaccine, made in Pune by Serum Institute of India; the UK too has a large order with AstraZeneca, for around 100 million doses, and is pressing ahead with regulatory approval of the vaccine, which released trial data that has come in for some scrutiny (and may well prevent the US drug regulator, for instance, from approving the vaccine in that country). There is a trial of this vaccine on in India as well (although the country can approve the vaccine based on the results of its UK/Brazil trial that have been released) but the confusion doesn’t stem from that front — it comes from an almost throwaway comment by health secretary Rajesh Bhushan on Tuesday, that the Indian “government never spoke about vaccinating the entire country”. The comment, which has been followed by radio silence, at least on his part, goes against what Prime Minister Narendra Modi said — that all Indians will be vaccinated. Sure, Indian Council of Medical Research chief Balram Bhargava (who was at the same briefing as Bhushan) sought to explain the health secretary’s comment by saying that the purpose of vaccination is to “break the chain of infection”, and that “if we are able to vaccinate a critical mass of people and break the virus transmission, we may not have to vaccinate the entire population”.

It’s important to clarify that the coronavirus vaccines being developed are not for everyone. They are for adults only. None of the vaccine trials thus far, bar one, has been on anyone under the age of 18 years. The exception is the Pfizer/BioNTech trial that, in September, recruited children who were 15-17 years old (in October, it recruited more children, some as young as 12). But the results of this part of the trial are still not out. And it is unlikely that Bhushan had this nuance in mind when he said what he did.

As for Bhargava’s explanation, while technically correct, it is perhaps only marginally less dangerous than the UK’s original herd-immunity strategy. This is not how you crush a pandemic as infective and as debilitating to body, spirit, and the economy as Covid-19.

There’s also a scientific basis for vaccinating everyone. As Eric Topol and Dennis Burton of The Scripps Research Institute, La Jolla, California wrote recently in Nature Medicine, at the end of a brief but illuminating note that discussed natural and vaccine-based immunity: “Overall, we are optimistic, given the number of platforms being investigated and the huge ongoing efforts, that a vaccine (or vaccines) against COVID-19 with immune responses and protection superior to that achieved through natural infection is an achievable goal.”

While, as the authors say, more data from the trials as well of infections is needed, questions remain on the extent of natural immunity of people who were infected but remained asymptomatic. Leaving it to nature is a risk the world can’t afford to take.

Universal vaccination is the only solution.

New Cases

Delhi runs record 78k tests, positivity rate drops to 5%
Delhi reported 3,944 new cases and 82 deaths due to the virus on Wednesday (Hindustan Times: 20201203)

https://epaper.hindustantimes.com/Home/ArticleView

A health worker collects a swab sample for Covid-19 testing at Tilak Nagar in New Delhi on Wednesday. Sanchit Khanna/HT PHOTO

Delhi on Wednesday created a new record, conducting more than 70,000 tests for the viral Covid-19 in a day, almost half of which were done using the more accurate RT-PCR method.

The daily state bulletin on Wednesday said that the city had conducted 78,949 tests in a day, including the highest number of RT-PCR tests at 36,370.

The state reported 3,944 new cases and 82 deaths due to Covid-19 on Wednesday, taking the total number of people affected by the viral infection in the city to more than 578,000.

At least 9,342 people have succumbed to the virus, so far.

So far, the highest number of tests conducted in a day in the city was 69,051 on November 28.

The government had planned to scale up testing to between 100,000 and 120,000 tests a day in mid-November after a meeting with Union home minister Amit Shah.

Despite the high number of tests, the positivity rate — proportion of samples that return positive among those tested — dipped to 5%. The positivity rate in the city has dropped below the current 5% only once so far.It was 4.99% on October 6.

During the "third wave" of cases, the daily positivity rate in the city had shot up to a high of 15.33% on November 15.

"Positivity declined to 5% today from 15.26% on November 7. Highest total tests 78949 and highest RT-PCR tests (36,370) ever with lowest RT-PCR positivity of 8.99%. Steadily corona cases and positivity coming down. Hope this will continue. Please observe all precautions," said Delhi health minister Satyendar Jain in a tweet. On November 7, the positivity rate as per RT PCR tests had touched 30%, the highest so far.

Experts believe that the spread of the infection has been controlled if a positivity rate of 5% or less is maintained for two weeks.

During the month of November, there was a difference of almost 16% on average in positivity rate of RT-PCR tests and rapid antigen tests conducted, data shared by the health minister shows. For Tuesday, the positivity rate of samples tested using RT-PCR and other molecular tests was 8.9% as compared to 1.6% among those tested using rapid antigen test.

"The current peak in the number of cases was driven by the interaction of people during the festive season and the high levels of pollution. Now, both have gone down – people are stepping out but there is no mad rush at the markets and the pollution levels are also much better. With such a huge number of cases, I think at least 40% or even more of Delhi's population may have been exposed to the infection. This means we are unlikely to see huge surge in number of cases again; now fewer number of infections would persist," said Dr Shobha Broor, former head of the department of microbiology at the All India Institute of Medical Sciences.

With the decrease in the number of cases being reported daily, the number of hospitalisations has also gone down. For the first time since November first week, the number of people admitted to hospitals across the city with the infection came down to 7,366.

This is still higher than the peak number of hospitalisation – just over 7,000 – seen during the second surge in the number of cases Delhi had seen in September. As for the first wave of infections, at its peak just over 6,200 people were in hospitals.

The rising number of hospitalisations, especially those in need of critical care, had prompted the Delhi government to increase 663 ICU beds in its own hospitals and ask around 75 private hospitals to reserve 80% of their total ICU beds for the treatment of Covid-19.

“Bed vacancy for Covid patients in Delhi hospitals increased to 11,341 from 7,973 since Nov 11 (more than 60% Covid beds are now vacant). During the same period, ICU bed vacancy increased to 1,732 from 518. Since Nov 7 Covid severity is coming down. Please observe all precautions,” said Jain in a tweet.

As on Wednesday evening, almost 39% of the hospital beds earmarked for Covid-19 were occupied and just about 65% of the ICU beds were occupied, according to the data on government’s Delhi corona app.

The ICU occupancy had gone up to 86% during the current surge in infections. Despite fewer hospitalisations, ventilator beds in big hospitals like Sir Ganga Ram, Indraprastha Apollo, Max, and Fortis continue to be completely full.

“Our ICUs are still running at capacity and even the wards are full. This is because we had long waiting lists of people and we get patients referred to from smaller centres as well. However, seeing that the number of cases in the city are on the decline, it is likely that we will start seeing a decline in some says,” said Dr Vikas Maurya, director and head of the department of pulmonology at Fortis, Shalimar Bagh.

Vaccine (The Asian Age: 20201203)

http://onlineepaper.asianage.com/articledetailpage.aspx?id=15259802

Covid: UK okays vaccine, shots to roll out next week

Help is on its way... we can see the dawn: UK health secy

London, Dec. 2: The UK on Wednesday became the first country to approve the Pfizer/BioNTech vaccine against Covid-19 after "rigorous" analysis by its independent regulator, paving the way for mass vaccinations from as early as next week among people at the highest risk of death from the deadly virus.

The British regulator, the Medicines and Healthcare products Regulatory Agency (MHRA), says the jab, which claims to offer up to 95 per cent protection against Covid-19 illness, is safe for roll out.

The UK government said the approval follows a "rigorous" analysis of the data, conducted at a faster pace but without any compromise on standards.

Prime Minister Boris Johnson welcomed the fantastic news and confirmed that the vaccine will begin to be made available from next week.

"It's the protection of vaccines that will ultimately allow us to reclaim our lives and get the economy moving again," Mr Johnson, a Covid-19 survivor, said.

The vaccines require two doses 21 days apart, with strong immunity response kicking in after seven days of the second dose. The MHRA said it will continue to monitor the data on a rolling basis once the vaccines are deployed among the British public.

"I am thrilled. Help is on its way... we can see the dawn. Let's redouble our efforts to follow the lockdown rules," said UK health secretary Matt Hancock. — *PTI*

- The Pfizer/BioTech formula is an mRNA vaccine that uses a tiny fragment of genetic code from the pandemic virus to teach the body how to fight Covid-19 and build immunity. An mRNA vaccine has never been approved for use in humans before, with people only receiving them in clinical trials so far.

- The vaccine must be stored at around -70C and will be transported in special boxes, packed in dry ice. Once delivered, it can be kept for up to five days in a fridge.

No link between vaccine shot, 'adverse' reaction in trial: DCGI

New Delhi, Dec. 2: A probe initiated by the Drugs Controller General of India (DCGI) into an alleged "serious adverse event" reportedly suffered by an Oxford Covid-19 vaccine trial participant in Chennai has found that it was not related to the shot administered to him, official sources said.

The DCGI arrived at the conclusion on Wednesday based on the recommendations of an independent expert committee constituted to look into the claim of a "serious adverse event" during the Serum Institute trial at a site in Chennai.

The team comprised a doctor each from AIIMS, Safdarjung Hospital, PG Institute of Medical Education and Research, Chandigarh, Lady Hardinge Medical College and Maulana Azad Medical College.

Last week, the 40-year-old man who was a volunteer in the third phase of the vaccine trial in Chennai, claimed to have suffered serious neurological and psychological symptoms after taking the experimental shot. — *PTI*

More on Page 4

Cancer survivors

Cancer survivors at higher risk of dying from flu: Study (New Kerala: 20201203)

https://www.newkerala.com/news/2020/209282.htm

Survivors from a wide range of cancers are more likely than people in the general population to be hospitalised or die from seasonal influenza even several years after their cancer diagnosis, warn researchers, including one of Indian-origin.

The study, published in the journal EClinicalMedicine, suggests that cancer survivors are also likely to be at higher risk of severe Covid-19 outcomes.

The research team from the London School of Hygiene iamp; Tropical Medicine (LSHTM), analysed medical records from 1990 to 2014 of more than 630,000 people in the UK, including over 100,000 survivors of a range of cancers.

Comparing the rates of influenza hospitalisation and death between cancer survivors and the cancer-free population, they found that the risk of these outcomes was more than nine times higher in survivors from lymphomas, leukaemia, and multiple myeloma, compared to those with no prior cancer.

Crucially, this raised risk persisted for at least 10 years after cancer diagnosis.

Despite the risks being raised compared to the general population, the absolute risks of developing severe flu were still relatively low, with about 1 in 1000 survivors of these types of cancer hospitalised with flu each year.

Survivors from other types of cancer also had more than double the risk of severe influenza outcomes for up to five years from diagnosis.

These findings persisted even after accounting for other suspected risk factors such as old age, smoking, socioeconomic status, body mass index and other illnesses.

The researchers also found that cancer survivors were more likely to have other diseases that are associated with increased risk of severe Covid-19 outcomes, such as heart disease, diabetes, respiratory disease and kidney disease.

"These findings have an immediate relevance as we enter the winter period we have a flu vaccine available, and the likelihood of a Covid-19 vaccine in the near future," said study author Krishnan Bhaskaran from LSHTM.

"Understanding how vaccination should be prioritised to protect the most vulnerable will be crucial over the next few months," Bhaskaran noted.

Alzheimer's disease

AI model uses retinal scans to predict Alzheimer's disease (New Kerala: 20201203)

https://www.newkerala.com/news/2020/209228.htm

A form of artificial intelligence (AI) designed to interpret a combination of retinal images was able to successfully identify a group of patients who were known to have Alzheimer's disease, say researchers.

According to the study, published in the British Journal of Ophthalmology, the novel computer software looks at retinal structure and blood vessels on images of the inside of the eye that have been correlated with cognitive changes.

The findings provide proof-of-concept that machine learning analysis of certain types of retinal images has the potential to offer a non-invasive way to detect Alzheimer's disease in symptomatic individuals.

"Diagnosing Alzheimer's disease often relies on symptoms and cognitive testing. Additional tests to confirm the diagnosis are invasive, expensive, and carry some risk," said study author Sharon Fekrat from Duke University in the US.

"Having a more accessible method to identify Alzheimer's could help patients in many ways, including improving diagnostic precision," Fekrat added.

The team built on earlier work in which they identified changes in retinal blood vessel density that correlated with changes in cognition.

They found decreased density of the capillary network around the centre of the macula in patients with Alzheimer's disease.

Using that knowledge, they then trained a machine learning model, known as a convolutional neural network (CNN), using four types of retinal scans as inputs to teach a computer to discern relevant differences among images.

Scans from 159 study participants were used to build the CNN 123 patients were cognitively healthy, and 36 patients were known to have Alzheimer's disease.

"We tested several different approaches, but our best-performing model combined retinal images with clinical patient data," said study lead author C Ellis Wisely.

"Our CNN differentiated patients with symptomatic Alzheimer's disease from cognitively healthy participants in an independent test group," Wisely added.

The researchers noted that additional studies will also determine how well the AI approach compares to current methods of diagnosing Alzheimer's disease, which often include expensive and invasive neuroimaging and cerebral spinal fluid tests.

Kidney Transplant

Dr. L H Hiranandani Hospital: How COVID Impacts Kidney Transplant (New Kerala: 20201203)

https://www.newkerala.com/news/2020/209123.htm

The Whole world has been engulfed by the COVID-19 pandemic. COVID-19 is the perfect pandemic. It has the capability to ruin health and it all its facets-physical, mental, social, spiritual, and economic health. The economic health is likely to create a recession in many countries.

As per Dr. L H Hiranandani Hospital just because there is a pandemic afoot does not reduce the burden of other disorders. The end-stage renal disorder is one of those illnesses. As patients thus afflicted were not keen to come to the hospital during the time, their conditioned worsened. The dialysis frequency had to be increased temporarily to stabilize their condition. Statistics reveal that the percentage of people with more vulnerabilities related to kidney disease has grown from 25.1% to 56.9% in 2020 due to the pandemic.

At the initial times there was fear both amongst the professionals that COVID-19 was known to drastically reduce the immunity of a patient and then post operatively immune suppressants would have to be exhibited. Thus the 'double whammy' of a patient who gets infection would land into a serious situation that could jeopardize the life of the recipient. Thus, the numbers of transplant feel and correspondingly the number in the dialysis centers increased!!

At this moment the Dr. L H Hiranandani Hospital that is approved for renal transplant by the Government of Maharashtra is also taking up the challenge to reassure patients that there will not be a challenge if they choose to go in for a transplant as the hospital has very strict protocols for Infection Control and also COVID as the areas are fully separate and even the staff attending are completely different. Yet the challenge is for the patient to overcome the inhibition and the mind set of getting transplant performed.

Dr. L H Hiranandani Hospital was felicitated by the Hon'ble Governor of Maharashtra for its sterling role for the city of Mumbai during the COVID pandemic. Dr. Sujit Chatterjee, CEO - Hiranandani Hospital represented the hospital. He also mentioned that, "We are at the forefront in this war against the COVID-19 virus. We stand shoulder to shoulder with the Government in this hour of crisis. We have treated a large number of cases, arguably the highest number amongst private hospitals in the city. The hospital was declared a dedicated COVID care hospital."

Heart disease

Study reveals LGB adults may be less likely to take statins to prevent heart disease (New Kerala: 20201203)

https://www.newkerala.com/news/2020/209113.htm

gay and bisexual (LGB) adults who may benefit from cholesterol-lowering medicine to prevent cardiovascular disease are less likely than non-LGB adults to take them, according to new research.

The research was published today in the Journal of the American Heart Association, an open-access journal of the American Heart Association.

According to an American Heart Association scientific statement, LGB adults have higher cardiovascular disease risk than non-LGB adults, in part because they are more likely to smoke, drink alcohol, use drugs, and be obese. There is strong evidence that cholesterol-lowering medicines called statins help prevent cardiovascular disease in adults who do not yet have cardiovascular disease but have risk factors like high cholesterol or diabetes. When prescribed for someone not yet diagnosed with heart disease, this is referred to as primary prevention for cardiovascular disease. Statins also benefit people who already have cardiovascular disease; for these adults, statins are taken for secondary prevention.

"Our study was the first to estimate the prevalence of statin use among the LGB population," said study author Yi Guo, PhD, M.S.P.H., assistant professor of Health Outcomes and Biomedical Informatics at the University of Florida College of Medicine in Gainesville, Fla. "We compared the rate of statin use among LGB and non-LGB individuals using Facebook-delivered online surveys and observed that the LGB respondents had significantly lower rates of statin use for primary cardiovascular disease prevention compared to the non-LGB respondents, yet that was not the case in secondary prevention."

Guo and colleagues conducted an online survey between September and December 2019 using a paid advertising Facebook campaign. Targeting adult Facebook users in the U.S. with interests in LGB keywords, such as "gay pride," the researchers developed a series of ads linking to the survey. The survey asked about sexual orientation, gender identity, statin use, health status, chronic conditions, smoking status, and more.

Their analysis of 1,531 Facebook respondents ages 40 years and older revealed

More than 12 per cent identified as LGB.

Nearly a third of all respondents were taking statins.

Less than 21 of LGB adults were taking statins for primary prevention compared to nearly 44 per cent of non-LGB adults.

There was no notable difference in statin use between the LGB and non-LGB groups for secondary prevention. "There could be many reasons for the difference we observed," Guo said. "LGB individuals may not go to the doctor as often, which leads to lower chances of being recommended statins for cardiovascular disease prevention."

He adds that the LGB population may also be less aware of their cardiovascular disease risk and the protective effect of statins. "We were surprised to see such a big difference in primary prevention, with less than half of the rate as the non-LGB population. This highlights the urgent need for tailored interventions and campaigns that promote the awareness of statin use and cardiovascular health in the LGB population."

"Health care providers should address their own biases and understand the complexities of LGB patients, making sure to provide guideline-directed recommendations in a culturally competent way," said study co-author Jiang Bian, PhD, associate professor of Health Outcomes and Biomedical Informatics at the University of Florida College of Medicine.

"What we have found is very much in line with the American Heart Association's statement for LBGTQ adults," Bian said. "First, more research is needed to better understand the cardiovascular disease health risks and outcomes in the LGB population. Second, educational programs are needed to educate health professionals on these unique health risks and outcomes in the LGB population and the appropriate way to communicate with LGB people."

Among the study's limitations are that using Facebook as a source may not accurately represent the LGB population as a whole, and the health information was self-reported. "However, since no studies have reported the prevalence of statin use in the sexual- and gender minority population, our study provides important initial data and validates the need for additional research," Guo said. "We need detailed studies to help us understand LGB statin use with clinical data from the real-word, such as those in electronic health records (EHRs) or administrative claims."

COVID-19 may deepen depression, anxiety

COVID-19 may deepen depression, anxiety, and PTSD among pregnant, postpartum women (New Kerala: 20201203)

https://www.newkerala.com/news/2020/209105.htm

In a new study published in Psychiatry Review, researchers from Brigham and Women's Hospital surveyed pregnant women and those who had recently given birth, finding concerning rates of depression, generalised anxiety, and post-traumatic stress disorder (PTSD) symptoms, which were found to be exacerbated by COVID-19-related grief and health worries.

"We know the perinatal period is already a time in which women are particularly vulnerable to mental health concerns," said corresponding author Cindy Liu, PhD, of the Department of Pediatric Newborn Medicine and the Department of Psychiatry. "We primarily wanted to see what factors related to the pandemic might be associated with mental health symptoms."

The researchers launched the Perinatal Experiences and COVID-19 Effects Study (PEACE) to better understand the mental health and well-being of pregnant and postpartum individuals within the U.S. during the COVID-19 pandemic. Among 1,123 of these women surveyed between May 21 and August 17, 2020, the researchers found that more than 1-in-3 (36.4 percent) reported clinically significant levels of depression. Before the pandemic, rates of perinatal depression (depression occurring during or after pregnancy) were generally considered to be 15-20 per cent. Furthermore, 1-in-5 (22.7 per cent) reported clinically significant levels of generalized anxiety, and 1-in-10 (10.3 per cent) reported symptoms above the clinical threshold for PTSD.

In particular, the researchers found that approximately 9 per cent of participants reported feeling a strong sense of grief, loss, or disappointment as a result of the pandemic. This group was roughly five times more likely to experience clinically significant measures of mental health symptoms. More respondents (18 percent) reported being "very worried" or "extremely worried" about COVID-19-related health risks. This group was up to over four times more likely to experience clinically significant psychiatric symptoms.

The researchers recruited participants for the PEACE survey primarily via word-of-mouth, using posts on email lists and in social media groups. They noted that as a result, the sample population was fairly homogenous 89.9 per cent were white, 92.1 percent were at least college-educated, and 98 per cent were living with their spouse or partner. The household income for 45 per cent of the participants was over USD 150,000.

"People who are working from home, who have maternity leave, or who simply have the time to do a survey like this are disproportionately white and well-off," Liu said. "That is a limitation to this work. Through a survey, we can get in-depth information very quickly, but we are missing the perspectives of various important segments of the population."

The researchers used standardized measures for evaluating COVID-19-related health worries and experiences of grief. "We were looking for associations that inform what we can do as clinical providers to better support families during this time," said co-author Carmina Erdei, MD, of the Department of Pediatric Newborn Medicine. "We wanted to know what is being taken away when a new mother is not able to participate in the usual rituals around birth and welcoming a new family member. The survey responses offer valuable insight into that and help guide what we as health care professionals can do better."

The researchers were able to examine how previous mental health diagnoses, as self-reported by the respondents, impacted these rates. They found that those with pre-existing diagnoses were 1.6-to-3.7 times more likely to have clinically significant measures of the three conditions

analyzed. But elevated psychiatric distress was observed in participants regardless of their mental health histories.

Qualitative data gathered through the survey have also provided the team with striking insights into the perinatal experience, but these findings have not yet been analyzed systematically. The researchers note that the mental health experiences of those surveyed match what they observed clinically during the early months of the pandemic, when many of the usual perinatal supports, like assistance from a partner, family member, or peer group, were limited due to fears surrounding COVID-19 infection risks and halting of support services.

"Obstetric practices weren't able to screen for mental health symptoms as well, all while people's mental health was under the most pressure," said co-author Leena Mittal, MD, of the Department of Psychiatry. "Mental health supports have persisted and come back in new ways, and the amount of innovation surrounding delivering group and individual care, especially using virtual platforms, is phenomenal. On the psychiatry side of things, we have never been busier, and individuals and families who feel they need mental health care should seek it."

Glucosamine supplements

Glucosamine supplements may reduce overall death rates: Study (New Kerala: 20201203)

https://www.newkerala.com/news/2020/209092.htm

Researchers have revealed that glucosamine supplements may reduce overall mortality almost as well as regular exercise does.

Glucosamine sulfate might provide some pain relief for people with osteoarthritis, glaucoma, weight loss, joint pain caused by drugs.

The supplement appears to be safe and might be a helpful option for people who can't take nonsteroidal anti-inflammatory drugs.

"Does this mean that if you get off work at five o'clock one day, you should just skip the gym, take a glucosamine pill and go home instead?" said study author Dana King from the West Virginia University in the US.

"That's not what we suggest. Keep exercising, but the thought that taking a pill would also be beneficial is intriguing," King added.

For the study, published in the Journal of American Board of Family Medicine, the research team assessed data from 16,686 adults who completed the National Health and Nutrition Examination Survey from 1999 to 2010.

All of the participants were at least 40 years old. The research team merged these data with 2015 mortality figures.

After adjusting for various factors -- such as the participants' age, sex, smoking status and activity level -- the researchers found that taking glucosamine/chondroitin every day for a year or longer was associated with a 39 per cent reduction in all-cause mortality.

It was also linked to a 65 percent reduction in cardiovascular-related deaths. That's a category that includes deaths from stroke, coronary artery disease and heart disease.

"Once we took everything into account, the impact was pretty significant," the researchers wrote.

The team explained that because this is an epidemiological study, rather than a clinical trial, it doesn't offer definitive proof that glucosamine/chondroitin makes death less likely. But the results are "encouraging."

"In my view, it's important that people know about this, so they can discuss the findings with their doctor and make an informed choice. Glucosamine is over the counter, so it is readily available," the authors wrote.

Fizher Vaccine (Hindustan: 20201203)

https://epaper.livehindustan.com/imageview_488735_86437298_4_1_03-12-2020_3_i_1_sf.html

फाइजर के टीके को ब्रिटेन में मंजूरी पर भारत लाना चुनौती

लंदन | एजेंसियां

महामारी से कराह रही दुनिया के लिए राहत भरी खबर। ब्रिटेन की सरकार ने बुधवार को कोरोना वायरस के पहले टीके को मंजूरी दे दी। अमेरिकी कंपनी फाइजर व बायोएनटेक ने इस टीके का निर्माण किया है। सभी तरह के परीक्षणों में यह प्रभावी पाया गया है। हालांकि, इसे भारत लाना अभी चुनौती है।

सभी उम्र के लोगों पर कारगरः ब्रिटेन की दवा और स्वास्थ्य उत्पाद नियामक एजेंसी एमएचआरए ने बताया कि यह टीका गुणवत्ता और असर के मामले में सभी मानकों पर खरा उतरता है। यह सभी उम्र, नस्ल के लोगों में प्रभावी है।

अगले हफ्ते से टीकाकरण : एजेंसी के मुताबिक, टीके की दो खुराक देनी होगी। पहली खुराक के 21 दिन बाद दूसरी खुराक दी जाएगी। ब्रिटेन में अगले हफ्ते से टीकाकरण शुरू होगा। बता दें, टीका बनने में औसतन 16 साल लगते हैं पर यह सिर्फ 10 माह में तैयार हुआ।

95%
प्रभावी वायरस के खिलाफ यह

44
हजार लोगों पर हुआ परीक्षण

1476 रुपये अनुमानित है फाइजर-बायोएनटेक के इस टीके का दाम

चुनौती आखिर क्यों

- देश में किसी भी टीके के इस्तेमाल से पहले क्लीनिकल ट्रायल करना होगा, अभी इसके कोई संकेत नहीं
- फाइजर टीका बनने से टीकाकरण तक -70 डिग्री सेल्सियस तापमान पर रखना होगा, यहां मुश्किल

रूस में सबका टीकाकरण

रूस में भी अगले हफ्ते से सभी लोगों को स्पुतनिक वैक्सीन दी जाएगी। राष्ट्रपति व्लादिमीर पुतिन ने बुधवार को निर्देश दिए। > ब्योरा पेज 08

Infection (Hindustan: 20201203)

https://epaper.livehindustan.com/imageview_488737_86414506_4_1_03-12-2020_5_i_1_sf.html

हालात

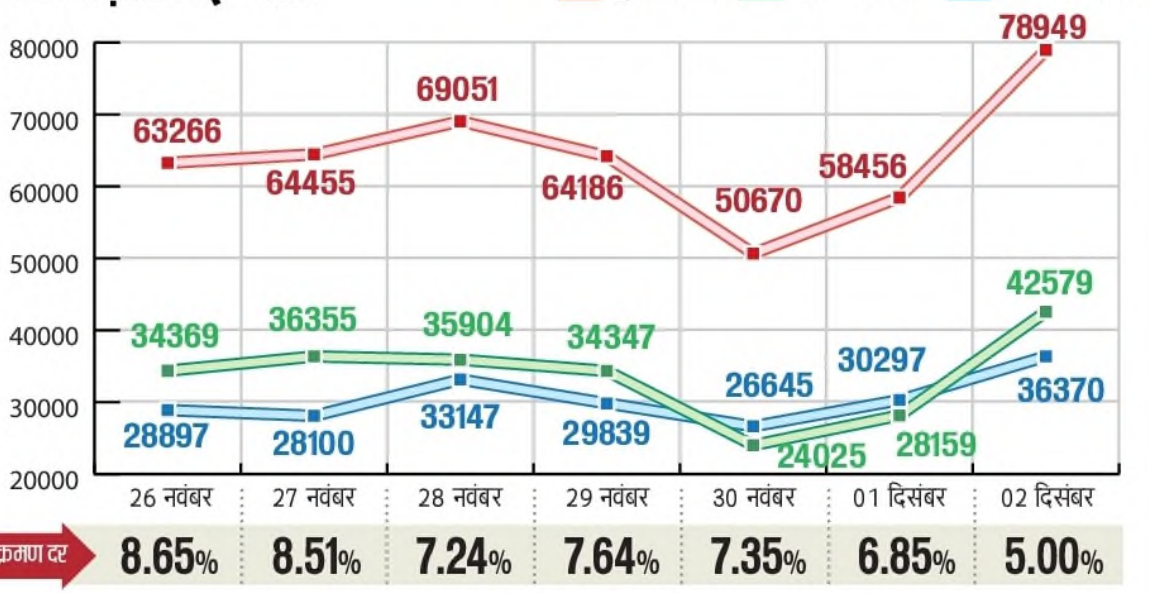
दिल्ली में कोरोना जांच बढ़ने के साथ ही संक्रमण दर में गिरावट

दिल्ली में आरटीपीसीआर जांच का दायरा बढ़ा दिया गया है। वहीं संक्रमण दर में गिरावट आई है। 26 नवंबर से दो दिसंबर के बीच आरटीपीसीआर जांच में 7473 सैंपल की वृद्धि देखने को मिली है। 26 नवंबर को आरटीपीसीआर जांच के लिए 28897 और दो दिसंबर को 36370 सैंपल लिए गए थे। वहीं इन सात दिनों में संक्रमण दर में 3.65% की कमी आई।

दो दिन रैपिड एंटीजन से ज्यादा आरटीपीसीआर जांच

सात दिनों में से दो दिन रैपिड एंटीजन से अधिक आरटीपीसीआर से कोरोना जांच के लिए सैंपल लिए गए। एक दिसंबर को आरटीपीसीआर से 30297 सैंपल लिए गए थे, जबकि रैपिड एंटीजन टेस्ट से 28159 सैंपल की जांच हुई। 30 नवंबर को भी रैपिड एंटीजन टेस्ट की तुलना में आरटीपीसीआर से 2620 जांच अधिक हुई थी।

ऐसे बढ़ती गई जांच



संक्रमण दर	8.65%	8.51%	7.24%	7.64%	7.35%	6.85%	5.00%

हालात

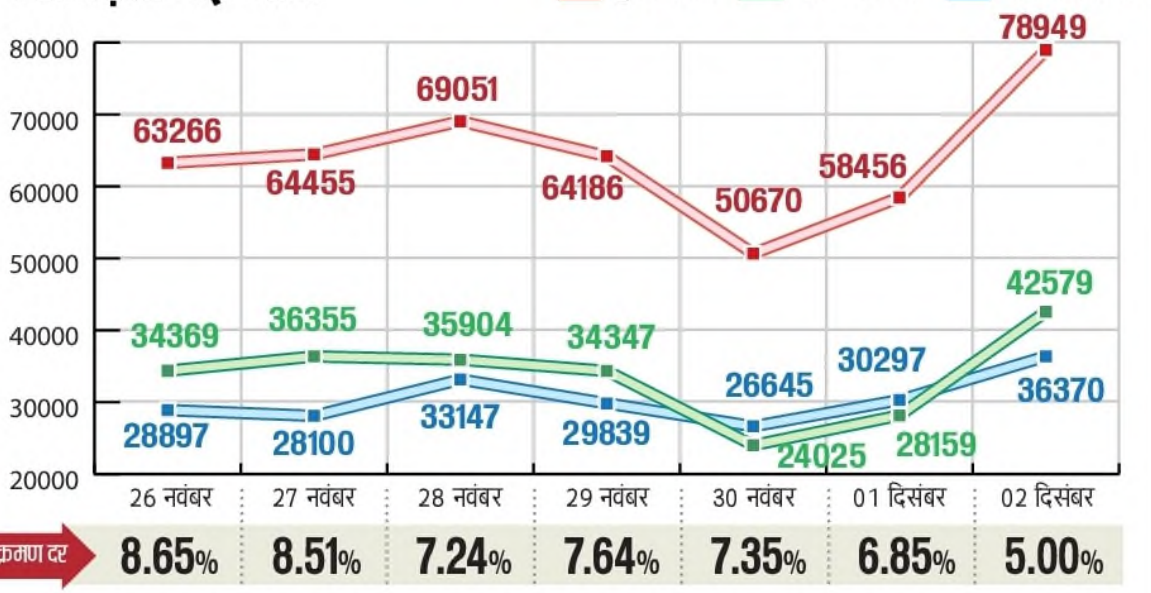
दिल्ली में कोरोना जांच बढ़ने के साथ ही संक्रमण दर में गिरावट

दिल्ली में आरटीपीसीआर जांच का दायरा बढ़ा दिया गया है। वहीं संक्रमण दर में गिरावट आई है। 26 नवंबर से दो दिसंबर के बीच आरटीपीसीआर जांच में 7473 सैंपल की वृद्धि देखने को मिली है। 26 नवंबर को आरटीपीसीआर जांच के लिए 28897 और दो दिसंबर को 36370 सैंपल लिए गए थे। वहीं इन सात दिनों में संक्रमण दर में 3.65% की कमी आई।

दो दिन रैपिड एंटीजन से ज्यादा आरटीपीसीआर जांच

सात दिनों में से दो दिन रैपिड एंटीजन से अधिक आरटीपीसीआर से कोरोना जांच के लिए सैंपल लिए गए। एक दिसंबर को आरटीपीसीआर से 30297 सैंपल लिए गए थे, जबकि रैपिड एंटीजन टेस्ट से 28159 सैंपल की जांच हुई। 30 नवंबर को भी रैपिड एंटीजन टेस्ट की तुलना में आरटीपीसीआर से 2620 जांच अधिक हुई थी।

ऐसे बढ़ती गई जांच



संक्रमण दर	8.65%	8.51%	7.24%	7.64%	7.35%	6.85%	5.00%