News and Views

NTAGI RECOMMENDS TO REDUCTION OF THE COVID BOOSTER DOSE GAP TO 6 MONTHS

A reduction of 3 months in the waiting time in administering the precautionary doses of the coronavirus disease 2019 (COVID-19) vaccine after the second dose was suggested by the National Technical Advisory Group Immunization (NTAGI), India. The Standing Technical Sub-Committee (STSC) of NTAGI recommended decreasing the time gap from 9 to 6 months on June 16, while the final decision is awaited from the Health Ministry.

The government advisory panel denied recommendations for mix-matching COVID-19 vaccines as they found differences found in the results of the study performed at the Christian Medical College (CMC) in Vellore.

The panel agreed to give the third dose to renal transplant patients before the cautionary dose. They analyzed and reviewed the data on the Covaxin and Corbevax vaccines for children aged 6 to 12, which were approved for emergency use in April.

They also showed concern about the spread of monkeypox and discussed the need for vaccination to prevent the same. Currently, anyone above the age of 18 who has completed 9 months after receiving the second dose is eligible for the precautionary dose. Last month, the Union government permitted citizens and students traveling abroad to obtain the vaccine before the 9-month waiting time mandated by the destination country's standards.

(*Source: ETHealthWorld, June 17, 2022*)

ALTERED NEUROLOGIC SYMPTOMS OBSERVED IN LONG COVID

Altered neurologic symptoms were observed in patients with long COVID and it persisted for a minimum of 6 months. Fifty-six COVID-19 positive people were included in a study conducted from October 2020 to October 2021 and monitored at the beginning of the study and 6 months later.

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection caused neurologic symptoms were seen in all with multiple sclerosis in 16 patients. Fatigue was seen in 89.3% of participants while 80.4% complained of headaches, with lack of concentration, memory loss and sleeplessness being the other common complaints.

Among 27 patients, 68.8% complained of memory loss and 61.5% suffered from bad concentration after 6 months. A third of the individuals reported complete symptom alleviation after 6 months. Despite, an improvement in the average score on the Montreal Cognitive Assessment (MoCA), a low score was reported in 26.3% of participants. Delayed recall, language and interest were the most impaired regions of cognition from which the patients were suffering.

Uncoordinated movements and cognitive problems (PASC-TAC) were observed in 4 long-term COVID patients who had no antecedent neurologic disease and had normal imaging. These people recovered slowly, and several symptoms required medication and supportive care after the 6-month point. Six of the individuals, including two people with a history of neurologic disease, had cranial nerve impairment.

In the NeuCOVID study, the symptoms will be tracked annually for up to 10 years to figure out what mechanism was causing such a disorder and what kind of medical support these people needed. The results were published in the *Annals of Clinical and Translational Neurology*.

(*Source: MedPage Today June 16, 2022*)

IMMUNOSUPPRESSIVE DRUGS MAY NOT BE NEEDED IN POST-TRANSPLANTATION PATIENTS

The New England Journal of Medicine disclosed that 3 children who recently received kidneys from their haploidentical parents may never need immuno-suppressive medicines.

The 3 children received their kidneys, as well as reduced-intensity conditioning and T-cell–depleted and CD19 B-cell–depleted hematopoietic bone marrow. The required medications including anti-thymocyte globulin (7.5 mg/kg), fludarabine (1 mg/kg/day for 4 days) and cyclophosphamide (1,200 mg/m^2), then total-body irradiation (200 cGy) and rituximab (200 mg/m^2) were administered to the patients to prepare for the HSCT (hematopoietic stem-cell transplantation).

The transplantation was done once donor myeloid and lymphoid chimerism following HSCT had been confirmed (at 5, 5.5 and 10 months for the individual patients). The patients were given intraoperative methylprednisolone and postoperative low-dose oral prednisone and tacrolimus in order to decrease

reperfusion inflammation. Doses of these drugs were tapered down by Day 30 and no further immunosuppression was required to be given.

The patients showed no clinical evidence of rejection. At 22 to 34 months after transplantation, renal function is normal. Two patients responded to further immunizations with a protective response, and the third was awaiting titer data at the time of publishing.

The researchers noticed that 1 year after kidney transplantation, peripheral blood mononuclear cells demonstrated functional tolerance to stimulator cells generated from their donor parent, and, thus, potentially unable to cause graft rejection even in the absence of immune suppression. However, in the presence of stimulator cells obtained from their nondonor parent or a healthy, unrelated control, their immune cells reacted normally and flourished. They further stressed the need for more studies to be conducted to evaluate if comparable results can be reached in allograft recipients who had a healthy pre-transplantation T-cell immunity and hematopoiesis.

(*Source: MedPage Today June 15, 2022*)

COVAXIN SAFE FOR 2 TO 18 YEARS CHILDREN, SHOWS PUNE TRIAL

Covaxin developed by Bharat Biotech in collaboration with the Indian Council of Medical Research and National Institute of Virology has proven to be safe well-tolerated and highly immunogenic in pediatric subjects in phase II/III study.

In the study, no serious adverse events (AE) were reported out of the total 374 AE reported among the majority. These AE such as pain in the injection site, etc. were the mildest symptoms and resolved within 1 day. Dr Pragya D Yadav, stated that the inclusion of younger age groups in vaccination drives would help in breaking the infection chain and diminish the outbreak. She also added that the vaccine showed a superior response among the pediatric group in comparison to adults. However, supplementary surveillance studies are under process to identify and eliminate "rarer adverse events".

Dr Krishna Ella, Chairman and MD, Bharat Biotech, stated that the trial has established Covaxin as a universal vaccination that is safe and effective for adults and children in both dosage forms, i.e., primary immunization dose and the booster dose. Meanwhile, Dr Rajiv Jaydevan, Co-chairperson of, the Indian Medical Association's National Task Force, stated that the vaccine is capable of generating neutralizing antibodies to protect against infection.

(*Source: https://timesofindia.indiatimes.com/city/pune/pune-trial-results-show-covaxin-safe-for-2-18-years-age-group/articleshow/92291222.cms*)

FIRST COVID-19 SHOT FOR INFANTS, PRESCHOOLERS AUTHORIZED

Recently, the Food and Drug Administration (FDA) authorized the first COVID-19 shots for infants and preschoolers, following the advisory panel's unanimous recommendation for shots from Moderna and Pfizer. However, there is one step left in the process, i.e., the CDC's guidelines on how to use the vaccines. CDC's independent advisors have begun debating for making suitable recommendations between the two-dose Moderna vaccinations versus the three-dose Pfizer vaccination regimen.

The FDA reports show that the little children developed virus-fighting antibodies with both vaccines. Although, both the vaccine studies showed side effects, including fever and fatigue, which were resolved in a short period; the Moderna vaccine showed an efficacy of 40% to 50% in comparison to Pfizer in the studies.

President Joe Biden, stated that the FDA approval is a huge relief for parents and families across America. For weeks, the Biden administration has been working on rolling out vaccinations for little kids with states, tribes, community health centers and pharmacies by pre-ordering millions of doses. Dr Peter Marx, FDA's vaccine Chief, stated that "both the vaccines have been approved with science and safety at the forefront of our minds."

(*Source: https://health.economictimes.indiatimes.com/news/industry/fda-authorizes-1st-covid-19-shots-for-infants-preschoolers/92291696*)

STUDY: OMICRON CARRIES HALF THE RISK OF LONG COVID AS DELTA

A recent study published in *The Lancet* showed that the Omicron variant poses half the risk of long COVID in comparison to the Delta variant. The chances of developing long COVID were found to be 4.5% from the Omicron variant in comparison to 10.8% from the Delta variant. Dr Claire Steves, King's College, London, stated that the reduced risk is good news, especially when Omicron is highly contagious. She also added that if the risk of developing long COVID symptoms were the same as the Delta variant or higher, the number of people with long COVID would have exploded.

Dr Steves and her colleagues have compared and tracked the patient symptoms for more than 56,000 people in the UK, who got Omicron infection between December 2021 to March 2022 with 41000+ people in the UK who tested positive for Delta variant between June 2021 to December 2021. On the other hand, the research team warned that the lower risk does not mean people should not worry about long COVID as the study did not address the reason behind a lower risk of long COVID associated with Omicron variant infection. Dr David Putrino, New York, stated that though the study highlights an important disease pattern, the likelihood of contracting COVID that can progress to severe chronic illness is around 5%, which is a significant figure.

(*Source: https://www.medscape.com/viewarticle/975841*)

AMYLOID CLUMPS: A POSSIBLE CAUSE OF BRAIN FOG IN COVID PATIENTS

A team of international researchers from the Swinburne University of Technology and La Trobe University in Australia and Luxembourg University in Luxembourg has uncovered the cause of the neurological conditions seen in patients with long-COVID, such as brain fog. The study published in *Nature Communications* proposed that in patients diagnosed with long-COVID symptoms, fragments of proteins from the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) virus led to the formation of amyloid clumps in the brain. These clumps were similar to the amyloid structure found in neurodegenerative diseases such as Alzheimer's and Parkinson's.

Hence, to have a better understanding of the impact of these amyloid clumps, the team performed biochemical flow-cytometry assays to determine the mechanism of brain cell death triggered by the amyloids.

Long-COVID is marked by neurological symptoms, such as memory loss, sensory confusion, severe headaches and even stroke. The long-COVID symptoms can persist for months after the infection is over. "While there is evidence that the virus can enter the brain of infected people, the precise mechanisms causing these neurological symptoms are unknown," stated Dr Mirren Charnley, a Postdoctoral Researcher at Swinburne University.

(*Source: https://health.economictimes.indiatimes.com/news/diagnostics/study-reveals-possible-cause-of-long-covid-brain-fog/92679192*)

EXPERTS CALL FOR AN UPDATE ON THE CURRENT BOOSTER POLICY

The BA.2.75, the new COVID-19 sublineage has been detected in India and is said to have unique mutations, which increase the risk of infection in people. With the emergence of the new Omicron sublineage, the experts are calling for an update in booster policy in India, citing that the current policy is not making the best use of evidence and available vaccine choices.

Experts who had earlier reviewed the Christian Medical College (CMC), Vellore data had decided against the mix and match regimen of vaccines. Mr Shahid Jameel, Virologist, University of Oxford stated that Covishield is far superior to Covaxin but India continues to use 3rd dose Covaxin in people who have been administered with 2 prior Covaxin doses. The immunity increases by 5 to 6 times when the booster dose is of the same vaccine as the first two doses. However, according to clinical data, a sharp increase in the antibody levels by 58 times has been seen, when the 3rd dose of Covishield is given after two doses of Covaxin.

Meanwhile, Mr Jameel added that several global data have shown that protein vaccines produce better results after two doses of the AstraZeneca (AZ) vaccine than the 3rd dose of the AZ vaccine.

(*Source: https://health.economictimes.indiatimes.com/news/policy/current-booster-policy-needs-to-be-updated-experts/92687425*)

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