

SERUM TIMES

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SERUM MEDICAL BULLETIN

From the desk of the Editor-in-Chief

Dear Doctors / Readers,

At first I would like to wish you a very happy Bengali New Year. As of now we are not quite sure about corona virus's movement in the future. It is known that China has been in a new phase of COVID-19 and many places of China have been under lockdown. Recently another new Covid variant XE has infected a few persons in India, first in Mumbai on 6th April and later in Gujarat on 8th April. The XE variant is known to be a sub-variant of Omicron. And there is yet no indication that it is more dangerous than other variants. There has been an anxiety about another wave, particularly at a time, when there has been a sharp decline of Covid infection in India and the infection is in its lowest level in more than two years.



In this issue we are going to discuss comparatively a less discussed area, i.e., Hospital Acquired Diseases (HAD). People go to hospitals or any health care facility centres for treatment of diseases or for healing diseases but these places of healing themselves, at times, are the sources of illness. Some of the most common HADs include bloodstream infection, pneumonia, unitary track infection, and surgical site infection.

Nosocomial infection

The HAD is also known as nosocomial (from a Greek word, meaning hospital) infection. It also means infections acquired during the process of receiving health care that was not present at the time of admission. One should notice that it is not a new problem. It was first brought to light in 19th century in Vienna. The HAD can be acquired by various means. Health care staff is a big source. The contaminated equipment, bed linens, air droplets, infection from outside environment, other infected patients, etc. are sources of HAD. Sometimes sources of HAD can not be determined easily.

A common way of understanding HAD would not be out of context here. The HAD is the infection that tends to lack evidence that it was incubating or present when a patient entered a health care centre. That is, it is acquired during post-admission. The HAD is seen everywhere in the world. Some studies have pointed out that the HAD has been on the rising in the USA after the pandemic. It had been decreasing after 2015. But the trend has changed its score during pandemic. We should be cautious about HAD and health facility centres should keep serious vigil on this to make a better world people's health.

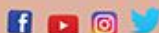
We again request you to take care about yourselves and your family members as we are not yet sure about the course of Covid 19.

Thanking you

Sanjib Acharya

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HAD has been a big headache for health sector in India

The hospital acquired diseases (HAD) has been a big health problem around the world. In India it has been a cause for concern according to many observers and specialists. It is said that the main reason for HAD has been caused by fungi. In the health facility centres the healthcare workers of reputed and many ordinary centers take preventive efforts in lowering HAD. In spite of that fungi carriages on their hands, clothes, medical equipments, etc. A recent report on the study made by All India Institute of Medical Sciences (AIIMS), New Delhi, revealed that out of 60 healthcare workers, 20, that is, about 33% showed fungal carriage. The AIIMS's published report categorises the sources of infection. Aprons/hospital scrubs and hands were contaminated in 17 (28.3%) and 3 (5%) respectively. Aprons/hospital scrubs mainly constituted moulds belonging to species of *Aspergillus*. Hands were contaminated with *Candida tropicalis*, *Candida parapsilosis* and *Candida auris*. But surprisingly no contamination was found from electronic devices or stethoscopes. The study points out that fungal infections are serious problems among hospitalised patients and cause increasing morbidity, mortality and health care costs.

The mentioned AIIMS campus is known as the biggest premier medical Institute of the country. Dr. Arvind Kumar, a member of the study of AIIMS, reportedly said about the study that the AIIMS

Symptoms & Signs of Hospital Acquired Diseases



Fever



Headache



Rashes



Severe Coughing



Diarrhea

had one of the most intense infection control programmes, including regular monitoring of hand hygiene, sterilization of instruments, and overall hygiene in hospital settings. So, in spite of that it can not avoid HAD. So one can think of what is the picture of the country as a whole.

How to prevent or lower it

The World Health Organization (WHO) recommendations are worth mentioning. WHO recommends sterilization and disinfection of the equipments used by multiple patients (tracheal tubes, ventilators) and of the ventilation system to prevent spread of fungal infection in health care facility centres are to be DONE carefully and regularly.

Specialists say the fungi can enter the body through cuts and wounds and cause infection during a hospital stay, especially if the wounds are severe. At the same time, they also say that the fungi are difficult to avoid fully because they are a natural part of environment.

Exercise protects brain by lowering cardiovascular risk factors

The relationship between regular exercise and brain health is yet fully known subject to the scientists. It is known that exercises increase brain glucose metabolism. This correlates with improved brain function. But a new study published in April, 2022 in Neurology, A journal of American Academy of Neurology observes that exercise plays a vital role in maintaining insulin and BMI (body mass index) levels. This may help stave off dementia by protecting gray matter volume in brain. Gray matter is the part of the brain involved in processing information.

The departure of the new study from previous studies

Previous studies had shown that larger gray matter volume can help protect against dementia by improving brain function. The new study shows that insulin resistance and BMI mediate the relationship between larger and smaller brain gray matter volumes.

Methodology of studying glucose metabolism and brain volume

The study involved 134 people with an average age of 69 who had no memory problems. The participants filled out a physical activity survey covering the past 12 months. They also had brain scans to measure glucose metabolism and brain volume. The researchers also examined how BMI and insulin affect brain health and found that insulin and BMI levels did not affect the metabolism of in the brain.



Conclusion

This current research study states that physical activity improves cognitive brain function by reducing BMI and improving insulin metabolism. Improvement in weight control can limit the rate of brain volume loss, a known risk factor for dementia.



CSR Activity of SERUM throughout April, 2022



Apr 8: Message-driven street play (Patha Natika) on the occasion of Annapurna Puja and food distribution to the deprived section of society



Apr 3: VACCICON 2022 at ITC Sonar



Apr 6: Meeting at SERUM Hatibagan Lab



Apr 14: Free Doctor's Clinic & Diagnostic Service



Apr 16: Barshabaran at Serum Auditorium



Apr 28: Iftar at Serum Auditorium



Apr 17: Thalassemia Awareness, Camp, Thalassemia Carrier Detection Test & Blood Group Test at Bastuhara Sahayata Samity & "Asthma Rang", Nabagram, Hooghly



Apr 19: Sri Sanjib Acharya addressed the special lecture on Thalassemia Awareness at Barrackpore Rastraguru Surendranath College



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