

SERUM TIMES

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SERUM MEDICAL BULLETIN

From the desk of the Editor-in-Chief

Dear Doctors / Readers,

We have been passing through a severe hot weather around the country. At the same time many of us are hopeful about phasing out of Covid 19 gradually although many parts of the world have been under continuous suffering from it. But we are now under another anxiety of viral attack of monkeypox. It may not be as devastating and powerful as the Covid 19 viruses. Also India has not registered any monkeypox cases as of now (29th May).



But government should not lead to lack of preparedness or lowering of guards against the virus. Recently, the World Health Organization (WHO) reportedly said that nearly 200 cases of monkeypox had been reported in over 20 countries. It was mainly contained in Africa but somehow it has been spreading elsewhere. Pragma Yadav, scientist of ICMR- National Institute of Virology, Pune, reportedly said that India had reported cases of cow and buffalo pox in humans. That indicated animal to human transformation of viruses. Monkeypox was an exotic pathogen for us as we had not been exposed to it, according to Yadav.

Another alarming report of acute hepatitis

The WHO also reportedly warned of acute hepatitis. As many as 650 probable cases of this unknown aetiology in children had been reported from 33 countries in five WHO Regions between April 5 and May 26, 2022. This hepatitis is known to be more clinically severe and a higher proportion of it develops as acute liver failure compared with previous reports of acute hepatitis of unknown aetiology in children.

Another important issue amongst children & youth is myopia. In this issue we are going to discuss the rising threat of myopia among the students or youth from their early age. It is known that millions of young children have been growing up with near sightedness or short-sightedness. According to an estimate by the WHO there were nearly 2 billion people with myopia in 2010. This means nearly a quarter of people are with this problem. The WHO projected that the number will increase to 3.3 billion by 2030. The prevalence has been different in different regions. This may not be a trend in India now, but it is alarming for India as well. This is because East Asia and the Pacific have reported some of the highest number for a decade now (as per the Hindu, May 23, 2022). As per another projection of the WHO nearly 50% of the world's population will be myopic by 2050.

The next story covers the matter in details where symptoms and causes and its treatment are discussed.

With best wishes,

Sanjib Acharya

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Myopia - not always genetic, lifestyle gaining more importance

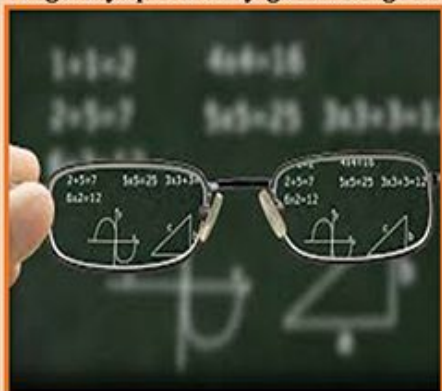
Myopia means hard to see distance objects but easy to read books as usual. Myopic also means nearsighted. It is a common problem that can be fixed by doctors with eyeglass or contacts or eye surgery.

What causes it? The structure of one's eye is the main reason. With normal vision an image is sharply focussed onto the retina. In myopia the point of focus is in front of the retina. This makes distant objects appear blurry. So any object near to you is clearly seen but objects further away are blurry. So myopia arises when one's eye lens becomes too convex or curved. Secondly, depth of the eye ball is too much, that is, the eyeball lengthened from front to back. When the length of the eye ball is too long as compared to the focussing power of the lens of the eye and cornea

Symptoms - first symptom is that more distant objects are blurred. Also headaches, squinting, eye straining, eye strain are symptoms of it. At the same time there can have eye fatigue when one tries to see objects more than a few feet away. For children with myopia have trouble reading the blackboard at school. Myopia runs in families and it generally starts in childhood.

Myopia rising high due to change of lifestyle amongst children

There are reports regarding how changes of the lifestyle have occurred among children. It is said that the spectacles to correct myopia is a symptom of myopia but not the cause of it. If myopia progress to high myopia it may go to dangerous level. It may lead to glaucoma or at worst to permanent vision loss.



Exposure to sunlight and maintain a suitable balance of near work and distant work are the most important factors to control intensity of myopia. Studies have observed that the numbers of children, particularly urban children, have been spending more time in indoors entertainment and near works like use of mobile phone, watching TV, reading books, etc. are growing very rapidly. This is the reason of higher number of cases of myopia. It is clear that the growingly cases of myopia are on rise with rapid urbanization.

Studies observed that myopia prevalence is higher by 35% among urban students than the rural students in India. Also, the power of the lens of spectacles is ever increasing year on year for urban students. So, to check or prevent to an extent, the governments and NGOs have to take initiative in building awareness of parents about the efficacy of exposure to sunlight and distant work of their children.

Encourage parents to take their children to play grounds or parks daily for quite some time routinely. Additionally, annual screening of eye-sight should be performed and schools must also take initiatives.

Path-breaking research on how brain links memories

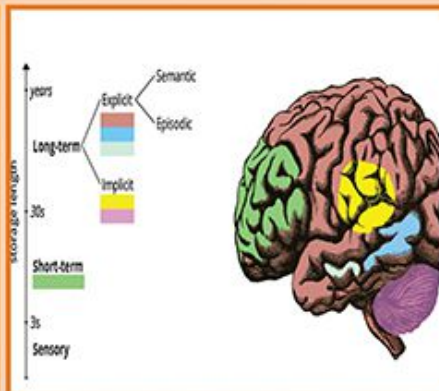
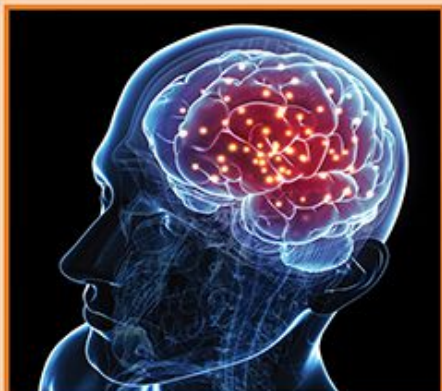
The main purpose of the research was to find out how to check memory loss that starts from middle age for many people. As we age, our brains lose the ability to link related memories. It is known that our brains store memories into groups, and so, brains rarely store single memories. Therefore, when one recollects something, one significant memory triggers the recall of others connected in time. The problem has been as people age their brains gradually lose this ability to link related memories.

A discovery by University of California, Los Angeles Health Science

The researchers have discovered a key molecular mechanism behind memory linking. They have also identified a way to restore the brain function in middle aged mice and a FDA approved drug that achieve the same thing. From Science Daily May 25 (SD) report it is known that the Drug is a HIV related. It is known that the research suggests a new method for strengthening human memory in middle age and a possible early intervention for dementia.

The science behind the issue

The cells are actually stubbed with receptors. To enter a cell means a molecule must latch into its matching receptor. This operates like a doorknob to provide access inside. The researchers focussed on a gene called CCR5. This encodes the CCR5 receptor. Actually this is the same one as the HIV hitches a ride on to infect the brain cell and cause memory loss in AIDS patients.



The departure of the recent study

In an early research, as SD reports, it was observed that CCR5 expression reduced memory recall. The new research has discovered a central mechanism underlying mice's ability to link their memories of two different cages. A tiny microscope opened a window into the animals' brains. That enables the scientists to observe neurons firing and creating new memories. Later they boosted that the CCR5 gene expression in the brains of middle-aged mice interfered with memory linking. The animal forgot the connection between the two cages. But when the scientists deleted the CCR5 gene in the animals, the mice were able to link memories that normal mice could not. The more clinical trial will establish the observation of the study in future.

SERUM's Corporate Social Responsibility (CSR)



May 1: Sri Sanjib Acharya, CMD, at the National Conference on Preventions of Thalassemia & Sickle Cell Anemia, Hyderabad.



May 3: Sri Sanjib Acharya addressing the Press at Serum Auditorium for the launching of 6-day long Thalassemia Awareness Program for the occasion of World Thalassemia Day



6-day long Thalassemia Awareness Program at various locations of Kolkata



Jadubabur Bazar



Bowbazar



College Street



Kumartuli



May 7: Jibandebata Samman at Serum Auditorium



May 8: Blood Donation organised on World Thalassemia Day



May 26: Free Doctor's Clinic



May 28: Free Health Check up, Thalassemia Awareness & subsidized Thalassemia Carrier Test at Swamiji Shakti Pith, Jyanga, Baguihati



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