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News and Views

Long Sleep or Sleep Apnea in Middle Age Double Risk for AD

Middle-aged individuals with sleep apnea or who get ≥9 hours of sleep at night have over twofold increased risk of developing Alzheimer's disease (AD) within about 6 years, suggests new research.

A UK Biobank study of over 5,00,000 individuals suggested that excessive daytime sleepiness had a link with increased risk for AD. When compared with individuals who got an average of 6-9 hours of sleep every night, those who got more than 9 hours of sleep had a higher risk for AD (hazard ratio [HR], 2.04; 95% confidence interval [CI], 1.56-2.67; $p < 0.001$). The findings were presented at the virtual Alzheimer's Association International Conference (AAIC) 2020… (*Medscape*)

Kids' Noses may have More COVID-19 Virus Than Adults'

Young children below the age of 5 years with mild-to-moderate coronavirus disease 2019 (COVID-19) were found to have high amounts of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) in their upper respiratory tract compared to adults or older children in a new research.

In a cohort of 145 patients less than 1 month of age to 65 years separated by age, investigators noted that the youngest children had significantly lower median cycle threshold (CT) values in comparison with older children or adults. This indicates that they had equivalent or more viral nucleic acid in the upper respiratory tract versus other age groups. According to the findings published in *JAMA Pediatrics*, there was a 10- to 100-times greater amount of SARS-CoV-2 in the nasopharynx of young children. However, researchers stated that the findings were limited to detection of viral nucleic acid and not infectious virus… (*Medpage Today*)

Smoking Tied to Increased Risk for Unruptured Aneurysm

Women who smoke cigarettes have an increased risk of having intracranial aneurysms, revealed a new study published online in *The Journal of Neurology, Neurosurgery and Psychiatry*.

The case-control study of over 500 women aged 30-60 years revealed that those with a history of smoking had about 4 times increased risk of having an unruptured intracranial aneurysm (UIA) in comparison with women without a history of smoking. Chronic hypertension was found to be associated with a threefold increased risk for UIA, compared with normotension… (*Medscape*)

It is OK to Treat Many Cancer Patients Despite Pandemic

During the ongoing COVID-19 pandemic, cancer treatment should not be discontinued or delayed if it has the potential to impact overall survival, according to new recommendations from the European Society of Medical Oncology (ESMO).

The society also recommends against labeling all patients with cancer as being vulnerable to infection with the virus as it can result in inappropriate care with negative outcomes. The recommendations are aimed at guiding physicians to optimize the pathway to cancer care besides improving outcomes during the pandemic. The recommendations are published online in the *Annals of Oncology*… (*Medscape*)

Russia Preparing Mass Vaccination Against Coronavirus for October

Moscow: According to local news agencies, Russia's health minister is preparing a mass vaccination campaign against the novel coronavirus for October, after a vaccine completed clinical trials.

Health Minister Mikhail Murashko said that a state research facility in Moscow had completed clinical trials of the vaccine and paperwork was on to get it registered. According to the minister, doctors and teachers would be the first to receive the vaccination. According to a source, Russia's first potential COVID-19 vaccine would obtain local regulatory approval in August and would be administered to health workers soon thereafter… (*Reuters*)

DCGI Approval to Serum-Oxford COVID-19 Vaccine for Phase 2, 3 Clinical Trials

New Delhi: The Serum Institute of India (SII) has received permission from the Drugs Controller General of India (DCGI) to conduct phase 2 and 3 human clinical

trials in India on the potential COVID-19 vaccine, stated a senior government official.

It is following an extensive evaluation that the DCGI has granted approval to SII to perform phase 2 and 3 clinical trial based on the recommendations of the Subject Expert Committee (SEC), mentioned the official. According to the study design, all subjects will receive two doses 4 weeks apart - first dose on Day 1 and second dose on Day 29 – followed by assessment of the safety and immunogenicity at predefined intervals… (*ET Healthworld – ANI*)

Common Causes of Pediatric Allergic Contact Dermatitis

The leading three contact allergens in patients below 18 years of age include hydroperoxides of linalool, nickel sulfate and methylisothiazolinone, suggests an analysis of data from the Pediatric Allergic Contact Dermatitis Registry.

This registry is the first multicenter prospective database in the United States focusing on pediatric allergic contact dermatitis. Investigators obtained data on 218 patients below 18 who were referred for an evaluation of allergic contact dermatitis at one of the 10 participating sites from January 2016 through June 2020. The mean number of allergens patch tested per child was 78. Nearly 81% of the children had one or more positive patch test reactions, with the rate being more or less similar among those with and without a history of AD (80% vs. 82%, respectively). The five top allergens were hydroperoxides of linalool (22%), nickel sulfate (19%), methylisothiazolinone (17%), cobalt chloride (13%) and fragrance mix I (12%). The findings were presented at the virtual annual meeting of the Society for Pediatric Dermatology… (*Medscape*)

Moist Heat Treatment of N95 Masks Eliminates COVID-19, Says Study

Moist heat treatment of N95 masks tends to eliminate the novel coronavirus, suggest scientists.

The study revealed that moist heat treatment of masks for 60 minutes at 70°C in a humid condition did not impair their structure or impact function. According to investigators, this low-cost reprocessing strategy could be applied 10 times without affecting the mask's filtration, breathing resistance, fit and comfort. This strategy could possibly help curb the global shortage of masks during the pandemic. The findings are published in the *Canadian Medical Association Journal (CMAJ)*… (*HT – PTI*)

Postmenopausal Estrogen Alone Reduces Breast Cancer Cases and Deaths

A follow-up study of menopausal hormone therapy has revealed that prior use of conjugated equine estrogen (CEE) led to a reduction in both breast cancer incidence as well as mortality, while prior use of CEE plus medroxyprogesterone acetate (MPA) was tied to an increase in incidence.

To explore the outcomes of the Women's Health Initiative for hormone therapy and breast cancer risk, investigators assessed the long-term follow-up of two randomized trials involving 27,347 postmenopausal women with no prior breast cancer and negative mammograms at baseline. An analysis done in 2015 revealed that CEE alone was associated with lower risk of breast cancer while CEE plus MPA was associated with increased risk. The present analysis confirmed that following a median follow-up of 20.3 years, and with mortality data available for over 98% of participants, CEE alone was linked with fewer cases of breast cancer compared with placebo. Additionally, CEE alone was also associated with lower mortality compared with placebo. Contrary to that, CEE plus MPA was associated with more cases of breast cancer than placebo and no statistically significant difference could be seen between CEE plus MPA and placebo for mortality. The study is published in *JAMA*… (*Medscape*)

Efficacy and Safety of a Polyherbal Formulation in Alcoholic Liver Cirrhosis

A study was conducted to determine the clinical efficacy and safety of a polyherbal formulation containing *Capparis spinosa, Cichorium intybus, Solanum nigrum, Cassia occidentalis, Terminalia arjuna, Achillea millefolium* and *Tamarix gallica*, in alcoholic liver cirrhosis.

This open clinical trial enrolled patients suffering from early alcoholic cirrhosis. Patients with evidence of esophageal varices, hepatic encephalopathy and malignant jaundice, and pregnant women were excluded from the study. A thorough history was obtained, and symptomatic evaluation and clinical examination were carried out for all patients prior to treatment and during follow-up visits every month till the end of treatment after 6 months. Liver function tests, hemogram and other biochemical tests were conducted at baseline and at the end of the study. The primary endpoints included rapid relief from clinical symptoms and physical signs along with improvement of efficacy biochemical parameters. The secondary endpoints included short- and long-term safety, and overall compliance to the drug treatment.

Fifty patients were enrolled in the trial. There was a significant reduction in the clinical symptom scores for asthenia, easy fatigability, tiredness, nausea, anorexia, abdominal discomfort, abdominal pain, stool frequency and muscle cramps; as well as in the physical sign scores of muscle wasting, jaundice, anemia, edema, ascites and hepatomegaly. There was a significant decrease in liver function test parameters including alanine transaminase, aspartate transaminase, total bilirubin, alkaline phosphatase, albumin and prothrombin time at the end of 6 months of treatment with the herbal formulation. No clinically significant adverse events were noted during the study.

This polyherbal formulation thus seems to be clinically safe and effective in the management of alcoholic liver cirrhosis.

Source: Agal S, Prasad SR, Mitra SK. Medicine Update. 2007;15(6):25-32.

Breastfeeding Link to COVID-19 Negligible: WHO

The World Health Organization (WHO) has stated that the risk of COVID-19 infection from breastfeeding is negligible and has never been documented. The agency urged for greater support for the practice of breastfeeding.

The appeal comes during the ongoing World Breastfeeding Week, as WHO cautions that not using mother's milk is tied to 8,20,000 child deaths a year, at a cost of $300 billion to the global economy. Dr Laurence Grummer-Strawn, head of the WHO's Food and Nutrition Action in Health Systems unit, stated that they have never come across any COVID-19 transmission through breast milk anywhere across the world. As per WHO, exclusive breastfeeding for 6 months has several benefits for the infant and the mother which outweigh the risk from the new coronavirus pandemic… (*UN*)

CDC Anticipates 2020 Outbreak of Life-threatening Acute Flaccid Myelitis

The Centers for Disease Control and Prevention (CDC) is anticipating that 2020 will represent another peak year for cases of acute flaccid myelitis (AFM).

This uncommon but serious neurologic condition that mostly affects children, has peaked every 2 years from August to November in the United States since 2014. CDC has released a new CDC Vital Signs report to alert healthcare providers to a possible outbreak in 2020. Parents and doctors are advised to suspect AFM in patients with sudden limb weakness, particularly from August through November. Recent respiratory illness or fever and neck or back pain or any neurologic symptom should increase their concern… (*CDC*)

Sero Survey Covers All 11 Districts in Delhi

New Delhi: The second serological survey in Delhi that began with four districts and spread to eight over the next 2 days, has covered all 11 districts.

Adequate blood samples have been collected to ascertain the prevalence of COVID-19 antibodies in Delhiites and the target of 15,000 samples will be met recently, stated a government official. The first survey in the capital that was conducted by Delhi government from June-end to the first week of July, had shown the presence of COVID-19 antibodies in nearly 24% of the total 21,387 samples collected… (*ET Healthworld – TNN*)

No Increase in Diabetes Risk with Rheumatoid Arthritis

Patients with rheumatoid arthritis (RA) had no increased risk for developing type 2 diabetes, reported a large population-based cohort study.

The HR for incident type 2 diabetes among RA patients was 0.72 (95% CI 0.66-0.78) in comparison with the general non-RA population, reported researchers in *Arthritis Care & Research*. It was noted that the odds of developing type 2 diabetes were 24-35% lower among RA patients, when compared with those with hypertension, osteoarthritis and psoriatic arthritis. Over median follow-up times varying from 1.4 to 1.8 years, diabetes diagnoses were reported among 2,091 in the RA group, 1,828 in the general non-RA group, 3,012 in the hypertension group, 1,802 in the osteoarthritis group and 366 in the psoriatic arthritis group, with crude incidence rates being the highest in the hypertension and psoriatic arthritis groups and lowest in RA group… (*Medpage Today*)

COPD Patients with Sleep Problems should be Screened for Mood Disorders

A robust link has been found between sleeping disturbances and depression in patients with chronic obstructive pulmonary disease (COPD) in a study published in the *Clinical Respiratory Journal*.

Researchers noted that adults with clinically stable COPD who had sleep problems had a significantly higher likelihood of reporting depression or anxiety, poor self-efficacy and poor health-related quality of life, in comparison with those not having sleep problems. Worse sleep in these patients was found to be associated with worse scores on measures of mood… (*Medscape*)

Novavax Signs COVID-19 Vaccine Supply Deal with Serum Institute of India

Novavax Inc has stated that it has signed a supply and license agreement with the Serum Institute of India for the development and commercialization of its COVID-19 vaccine candidate.

The exclusive rights for the vaccine in India will be with the Indian drugmaker during the term of the deal. It will also have nonexclusive rights during the period of the pandemic in all countries except the ones characterized as upper-middle or high-income countries by the World Bank.

Novavax had recently reported that its experimental COVID-19 vaccine led to the production of high levels of antibodies against the novel coronavirus in a small, early-stage clinical trial. A large pivotal Phase III trial is expected to begin by late September… (*Reuters*)

Most Patients Who Recovered from COVID-19 in Wuhan Suffer Lung Damage

About 90% of a sample group of patients who had recovered from the novel coronavirus from a prominent hospital in Wuhan, China, have reported lung damage. About 5% of them are again in quarantine after testing positive for the virus.

Investigators at the Zhongnan Hospital of Wuhan University have been conducting follow-up visits with 100 recovered patients since April. The first phase of the 1-year program, which finished in July, revealed that 90% of the patients still had lung damage. This suggests that their lungs' ventilation and gas exchange functions have not yet recovered to the level of healthy individuals, reported the state-run *Global Times*. It was also noted that the antibodies against the coronavirus in 10% of the 100 patients have disappeared… (*ET Healthworld*)

People Dying After Drinking Hand Sanitizer: CDC

People are getting sick and some even dying after swallowing hand sanitizer, said the US CDC recently. Four individuals had died and others had suffered impaired vision or seizures, stated the CDC.

While hand sanitizer is useful for cleaning the hands during the coronavirus pandemic, it is not safe to swallow, warns the CDC. A CDC team reported about 15 adults in Arizona and New Mexico who have been hospitalized for methanol poisoning after consumption of alcohol-based hand sanitizers from May through June.

The US Food and Drug Administration (FDA) has also constantly warned about methanol in some hand sanitizers available in the United States. The agency has warned against over 100 hand sanitizer products… (*CNN*)

PCOS Tied to a Twofold Risk of Developing Psoriasis

Polycystic ovarian syndrome (PCOS) was found to be associated with about a twofold risk of developing psoriasis in a propensity score-matched analysis, presented at the virtual annual meeting of the Group for Research and Assessment of Psoriasis and Psoriatic Arthritis.

Overall, 1 million randomly selected records from Taiwan's Longitudinal Health Insurance database were analyzed. From 2000 through 2012, a case group with at least three outpatient diagnoses or one inpatient diagnosis of PCOS was identified. Each was then compared with 4 patients without PCOS, matched by age and index year. Comorbidities were found to be higher in the PCOS patients, including asthma (6.7% vs. 4.9%), COPD (14% vs. 11%), chronic liver disease (8.0% vs. 5.0%), diabetes mellitus (3.0% vs. 1.4%), hypertension (2.4% vs. 1.5%), hyperlipidemia (5.4% vs. 2.5%), depression (5.4% vs. 3.9%) and sleep apnea (0.23% vs. 0.10%). Investigators noted a higher cumulative incidence of psoriasis in the PCOS group. Other factors that were linked with increased risk of psoriasis included advanced age (>50 years old; adjusted HR [aHR], 14.13; 95% CI, 1.8-110.7) and having been diagnosed with cancer (aHR, 11.72; 95% CI, 2.87-47.9)… (*Medscape*)

Are Skin Rashes a Clue to COVID-19 Vascular Disease?

Some rashes seen in severe COVID-19 patients may be a clinical clue to an underlying thrombotic state, suggest researchers.

Four patients with severe illness at two New York City academic medical centers developed livedoid and purpuric rashes, that were associated with elevated D-dimer levels and suspected pulmonary emboli, reported researchers in *JAMA Dermatology*. All the patients were receiving prophylactic anticoagulation since admission and developed the hallmark manifestations of cutaneous thrombosis in spite of an increase to therapeutic dose anticoagulation for the suspected pulmonary embolism before the rash appeared… (*Medpage Today*)

The Potential Effect of Zinc Supplementation on Pathogenesis of COVID-19

New and original therapeutic options against coronavirus disease are urgently anticipated in the

ongoing current COVID-19 pandemic. Because of its rapid spread and vast number of individuals affected worldwide, cost-effective, universally available, and safe options with least side effects and simple use are extremely necessary.

In this review, the potential use of zinc as preventive and therapeutic agent alone or in combination with other schemes are discussed. Generally, zinc meets the above described criteria effortlessly. Although several data on the association of the individual zinc status with viral and respiratory tract infections are available, study data regarding coronavirus infection is missing.

However, it can be assumed as it is indicated by others and is detailed in this viewpoint, while focusing on re-balancing of the immune response by zinc supplementation.

Till now, the role of zinc in viral-induced vascular complications has rarely been discussed. Remarkably, most of the high risk groups that are described for COVID-19 are also associated with zinc deficiency. Zinc is essential to preserve natural tissue barriers of the respiratory epithelium, inhibiting pathogen entry, for a balanced role of the immune system and the redox system. Zinc deficiency can possibly be added to the factors affecting individuals to infection and harmful progression of COVID-19.

In conclusion, because of the zinc's direct antiviral properties, it can be expected that zinc supplementation is beneficial for most of the population, particularly in those with suboptimal zinc level.

Source: Wessels I, Rolles B, Rink L. Front Immunol. 2020;11:1712.

Global Cooperation Must for Fight Against COVID-19: WHO

Director-General of the WHO, Tedros Adhanom Ghebreyesus, has urged countries to unite in the fight against COVID-19.

While addressing the Aspen Security Forum, he stated that the security of all humans living on this planet is interdependent and that no country will be safe until all the people are safe. He urged world leaders to cooperate and act to end the pandemic. "..It's the right choice and it's the only choice we have," he added. He also cautioned against vaccine nationalism.

He stated that for fair distribution to take place, there has to be a global consensus to make a vaccine, a global public product… (*UN*)

New Drug Shows Dramatic Recovery in COVID-19 Patients with Respiratory Failure

Houston: RLF-100, also known as aviptadil, has been found to result in rapid recovery from respiratory failure in critically ill COVID-19 patients by doctors at a hospital in Houston.

The drug has received approval from the FDA for emergency use in patients who are too ill to enter the FDA's Phase 2/3 trials. Houston Methodist Hospital has been the first to report that the drug led to rapid recovery in patients on ventilators as well as those with severe medical conditions after 3 days of treatment. The drug includes Vasoactive Intestinal Polypeptide (VIP), which is seen in high concentrations in the lungs and blocks several inflammatory cytokines… (*ET Healthworld – PTI*)

In Canada, Obesity No Longer to be Determined by Weight Alone

Physicians in Canada issued new guidelines that urge doctors in the country to take a new approach in the way patients with obesity are treated.

The guidelines, published in the *Canadian Medical Association Journal*, recommend that obesity should be classified as a chronic illness that needs customized treatment and long-term care. The authors urge doctors not to rely on body mass index (BMI) alone while diagnosing their patients. According to Dr Arya Sharma, co-author of the guidelines, people would be diagnosed as obese if their body weight has an impact on their physical health or mental well-being… (*CNN*)

Asymptomatic COVID-19 Patients may Shed Virus Longer

Viral loads have been found to be similar among asymptomatic and symptomatic COVID-19 patients and continued to be that way for weeks following diagnosis, revealed South Korean researchers.

A study of around 300 patients with positive polymerase chain reaction (PCR) tests for SARS-CoV-2 has revealed that asymptomatic patients had a slightly shorter median time to negative conversion compared to symptomatic patients (17 vs. 19 days, respectively, $p = 0.07$). However, CT values in PCR tests for lower respiratory tract samples suggested that viral loads remained more or less same or decreased more gradually in the asymptomatic individuals from diagnosis to discharge from isolation, reported researchers in *JAMA Internal Medicine*… (*Medpage Today*)

Vitamin D may have a Role in Reducing Recurrence of Positional Vertigo

According to a randomized trial published in *Neurology*, daily supplementation with vitamin D and calcium carbonate could significantly decrease the recurrence of benign paroxysmal positional vertigo (BPPV), more so in patients with low serum vitamin D levels.

Investigators stated that vitamin D and calcium supplementation could be the first medical treatment to prevent the recurrence of positional vertigo. The study had 445 patients in the intervention group and 512 in the observation group who completed at least 1 month of follow-up. The number of recurrences per one person-year was found to be 0.83 in the intervention group compared to 1.10 in the observation group, with an incidence rate ratio (IRR) of 0.76 and a decrease in the annual recurrence rate of 0.27 with supplementation… (*Medscape*)

Protective Effect of Zinc Supplementation During COVID-19

The hunt for potential protecting and therapeutic antiviral approaches is very essential and urgent due to the evolving COVID-19 pandemic worldwide, which is caused by SARS-CoV-2 virus, also known as coronavirus. Zinc is identified and considered to modulate antiviral and antibacterial immunity and also regulate the inflammatory response. Regardless of the lack of available clinical data, certain indications do suggest that modulation of zinc status might be beneficial in COVID-19.

Zinc is involved in a variety of biological processes and also in the regulation of carbohydrate and lipid metabolism, functioning of the reproductive, cardiovascular and nervous system. The most important role of zinc is demonstrated for the immune system as it regulates proliferation, differentiation, maturation and functioning of leukocytes and lymphocytes. Zinc plays a signaling role in the modulation of inflammatory responses and is also a factor of nutritional immunity. Alteration of zinc status can significantly affect the immune response resulting in increased susceptibility to inflammatory and infectious diseases such as malaria, tuberculosis, pneumonia and acquired immune deficiency syndrome (AIDS). Previous data had demonstrated that zinc status is associated with the incidence of respiratory tract infections in children and adults. Infants, especially preterm ones, and elderly, are considered to be at high risk of deficiency of zinc and its adverse effects.

Improved antiviral immunity by zinc occurs through up-regulation of interferon-α production and by increasing its antiviral activity. Zinc possesses anti-inflammatory activity by preventing NF-κB signaling and modulating the regulatory T-cell functions, which can limit the cytokine storm in COVID-19. Improved zinc status might reduce the risk of bacterial co-infection by improving the mucociliary clearance and barrier function of the respiratory epithelium. It also has direct antibacterial effects against *Streptococcus pneumoniae*. Zinc status is also associated with risk factors for severe COVID-19 such as aging, immune deficiency, diabetes, obesity and atherosclerosis, as these are considered as high risk groups for zinc deficiency.

Thus, zinc might possess protective effects and can be considered as preventive and adjuvant therapy of COVID-19 through reducing inflammation, improving mucociliary clearance, preventing ventilator-induced lung injury and modulation of antiviral and antibacterial immunity.

Source: Skalny AV, Rink L, Ajsuvakova OP, et al. Int J Mol Med. 2020;46(1):17-26.

COVID-19 Vaccine may be Only Partially Effective, Warns Fauci

A vaccine that is approved for coronavirus could end up being effective only 50-60% of the time. This means that public health measures will still be necessary to control the pandemic, stated Dr Anthony Fauci, top US infectious diseases expert.

He stated that it is still not known what the vaccine efficacy might be. He added that he would want it to be 75% or more. However, the odds of a vaccine being 98% effective are not too good. Therefore, public health approach is still going to be needed to fight the pandemic. According to Fauci, studies of Moderna Inc's COVID-19 vaccine could yield definitive data in November or December this year… (*Reuters*)

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