Severe Form of Mpox Identified in Patients With Advanced HIV

A severe type of mpox in people with advanced HIV is characterized by necrotizing skin lesions, lung nodules, and acute infections, including sepsis, according to an analysis of 382 hospitalized patients from 19 countries published in The Lancet. This form of mpox carries a high mortality rate for those with low levels of a type of white blood cell called CD4 T lymphocytes or CD4 cells: of the 179 cases the researchers analyzed with 200 or fewer CD4 cells per mm³, 27 people—or 15%—died.

In addition, 25% of patients with mpox who started or restarted antiretroviral therapy likely experienced an exaggerated response to the mpox infection known as immune reconstitution inflammatory syndrome. Of those 21 patients, more than half died.

The researchers called for the World Health Organization and the US Centers for Disease Control and Prevention to include this form of mpox as an AIDS-defining condition to help prioritize vaccines and antivirals for those at highest risk of severe disease. A linked editorial, however, cautioned that characterizing the condition as “AIDS-defining” could increase stigma around mpox and HIV.

Published Online: March 8, 2023. doi:10.1001/jama.2023.3191

FDA Approves First Over-the-counter Combined COVID-19 and Flu Test

In late February, the US Food and Drug Administration (FDA) granted an Emergency Use Authorization to an at-home diagnostic test that identifies SARS-CoV-2, the virus that causes COVID-19, as well as influenza strains A and B. The test detected 100% of negative and 88.3% of positive COVID-19 samples, 99.3% of negative and 90% of positive influenza A samples, and 99.9% of negative influenza B samples.

The single-use test, developed by the company Lucira, uses nasal swabs self-collected by people aged 14 years or older, or collected by an adult for those aged 2 years or older. Patients should report their results to their physician to obtain follow-up care, if needed, and for public health reporting, the FDA said.

Published Online: March 8, 2023. doi:10.1001/jama.2023.3192

Ultrasound Treatment Improved Parkinson Disease Symptoms

Minimally invasive ultrasound therapy that destroys one side of the globus pallidus, a brain structure that helps control voluntary movement, improved motor function and reduced involuntary movement among people with Parkinson disease, according to data from 94 participants in a randomized clinical trial.

At 3 months posttreatment, 69% of participants receiving the ultrasound treatment but only 32% of participants receiving the sham procedure had improved at least 3 points on a standard assessment of movement disorders. Moreover, 75% of those who received the active treatment had maintained the improvement at 1 year. Adverse events included trouble speaking, changes to participants’ gait, loss of taste, vision problems, and facial weakness.

An associated editorial in The New England Journal of Medicine noted that younger patients, those with lower motor severity scores, and people who had more trouble with involuntary movement were more likely to improve after the therapy.

Published Online: March 8, 2023. doi:10.1001/jama.2023.3193

Autoimmunity in Down Syndrome Linked to Immune System Dysregulation

People with Down syndrome, who tend to have high rates of autoimmune conditions, experience a dysregulation in their adaptive immune response, according to a study published in Nature.

Plasma samples from 21 participants with Down syndrome had increased levels of certain cytokines at baseline—on par with levels seen in people with severe acute infection—compared with 10 age-matched controls. Those with the condition also had hyperactive T cells as well as high amounts of a specific type of B cell—CD11c+—and autoantibodies. “Perhaps dampening chronic steady-state inflammation in [Down syndrome] could prevent the accumulation of self-reactive autoantibodies and lessen disease burden,” the authors wrote. Drugs such as tocilizumab and JAK inhibitors are potential candidates, study author Dusan Bogunovic, PhD, said in a statement.

Published Online: March 8, 2023. doi:10.1001/jama.2023.3194

CDC Report Documents Disparities in Mental Health–Related ED Visits

As the number of people with mental health disorders climbed, racial and ethnic disparities continued to underlie who received care for their conditions and where, according to a report by the US Centers for Disease Control and Prevention’s National Center for Health Statistics.

With 96.8 visits per 1000 adults, Black adults had longer ED wait times and longer visits than White adults, and were less likely to be admitted or transferred to another hospital than Hispanic or White adults. In addition, Medicaid covered a greater proportion of visits by Black and Hispanic adults than by White adults.

Published Online: March 8, 2023. doi:10.1001/jama.2023.3195

Autoimmunity in Down Syndrome Linked to Immune System Dysregulation

People with Down syndrome, who tend to have high rates of autoimmune conditions, experience a dysregulation in their adaptive immune response, according to a study published in Nature.

Plasma samples from 21 participants with Down syndrome had increased levels of certain cytokines at baseline—on par with levels seen in people with severe acute infection—compared with 10 age-matched controls. Those with the condition also had hyperactive T cells as well as high amounts of a specific type of B cell—CD11c+—and autoantibodies. “Perhaps dampening chronic steady-state inflammation in [Down syndrome] could prevent the accumulation of self-reactive autoantibodies and lessen disease burden,” the authors wrote. Drugs such as tocilizumab and JAK inhibitors are potential candidates, study author Dusan Bogunovic, PhD, said in a statement.

Published Online: March 8, 2023. doi:10.1001/jama.2023.3194

CDC Report Documents Disparities in Mental Health–Related ED Visits

As the number of people with mental health disorders climbed, racial and ethnic disparities continued to underlie who received care for their conditions and where, according to a report by the US Centers for Disease Control and Prevention’s National Center for Health Statistics.

With 96.8 visits per 1000 adults, Black adults had longer ED wait times and longer visits than White adults, and were less likely to be admitted or transferred to another hospital than Hispanic or White adults. In addition, Medicaid covered a greater proportion of visits by Black and Hispanic adults than by White adults.

Published Online: March 8, 2023. doi:10.1001/jama.2023.3195

Autoimmunity in Down Syndrome Linked to Immune System Dysregulation

People with Down syndrome, who tend to have high rates of autoimmune conditions, experience a dysregulation in their adaptive immune response, according to a study published in Nature.

Plasma samples from 21 participants with Down syndrome had increased levels of certain cytokines at baseline—on par with levels seen in people with severe acute infection—compared with 10 age-matched controls. Those with the condition also had hyperactive T cells as well as high amounts of a specific type of B cell—CD11c+—and autoantibodies. “Perhaps dampening chronic steady-state inflammation in [Down syndrome] could prevent the accumulation of self-reactive autoantibodies and lessen disease burden,” the authors wrote. Drugs such as tocilizumab and JAK inhibitors are potential candidates, study author Dusan Bogunovic, PhD, said in a statement.

Published Online: March 8, 2023. doi:10.1001/jama.2023.3194

CDC Report Documents Disparities in Mental Health–Related ED Visits

As the number of people with mental health disorders climbed, racial and ethnic disparities continued to underlie who received care for their conditions and where, according to a report by the US Centers for Disease Control and Prevention’s National Center for Health Statistics.

With 96.8 visits per 1000 adults, Black adults had longer ED wait times and longer visits than White adults, and were less likely to be admitted or transferred to another hospital than Hispanic or White adults. In addition, Medicaid covered a greater proportion of visits by Black and Hispanic adults than by White adults.

Published Online: March 8, 2023. doi:10.1001/jama.2023.3195
Blood Biomarker Helps Distinguish Vascular Dementia

Measuring blood levels of placental growth factor (PIGF), a molecule that prompts the development of new blood vessels, can help distinguish whether cognitive problems stem predominantly from vascular issues or another cause, such as Alzheimer disease, according to an analysis of 335 patients.

The researchers, who reported their findings in *Alzheimer and Dementia*, found that participants whose PIGF levels fell in the top quartile were about 3 times as likely to have cognitive impairment or dementia and more than twice as likely to have imaging evidence of cerebral small vessel disease. Moreover, each unit increase in PIGF was tied to a 22% increase in the likelihood of cognitive impairment and a 16% increase in likelihood of imaging evidence of cerebral small vessel disease.

Published Online: March 8, 2023. doi:10.1001/jama.2023.3196

Older Black Men Have Higher Mortality After Elective Surgery

Black men in the US have a higher mortality rate after surgery than Black women as well as White women and men, based on the outcomes of more than 1.8 million Black and White patients aged 65 years or older who were covered by Medicare.

After undergoing an elective surgery, 1.3% of Black men died within 30 days compared with 0.85% of White men. One-third of that difference was due to variation between surgeons, the analysis found. For non-elective surgeries, there was no difference in mortality between Black and White men, although Black and White women had lower mortality rates.

Published Online: March 8, 2023. doi:10.1001/jama.2023.3197

WHO: Marburg Virus Outbreak Confirmed in Equatorial Guinea

The Institute Pasteur in Dakar, Senegal, confirmed Equatorial Guinea’s first case of Marburg virus disease, which carries a case-fatality rate of up to 88%, on February 8. The person with the confirmed infection died, as did 8 of their contacts who had probable or suspected cases. Their symptoms included fever, vomiting, and bloody diarrhea. Two people also experienced skin lesions and bleeding from the ear.

The country is at high risk because of the outbreak and surrounding regions are at moderate risk, the World Health Organization (WHO) said in a late February statement. The global risk posed by Marburg virus, which is spread via direct contact with fluids from people who are infected, remains low.

There are currently no vaccines or antivirals available to treat those infected with Marburg virus disease, but rehydration and symptom management improve survival. Tools such as contact tracing, testing samples from possible cases, and infection control—including safe burials—can help prevent additional cases, the WHO reported.

Published Online: March 8, 2023. doi:10.1001/jama.2023.3199

Fewer MRIs to Monitor Small Incidental Pituitary Tumors Might Be Safe

The majority of pituitary microadenomas—tumors in the pituitary gland that measure less than 10 mm—either remained the same or decreased in size over time, according to magnetic resonance imaging (MRI) results from 177 patients during a study period spanning 2003 to 2021. Of the 28% of pituitary microadenomas that increased in size, their rate of growth was slow and only 1.7% grew to more than 10 mm.

Based on their results, which were published in *Annals of Internal Medicine*, the authors suggested that less frequent MRI surveillance than is currently recommended by the Endocrine Society’s 2011 guidelines might be appropriate. The authors cited unknown risks of long-term exposure to gadolinium, a component of contrast agents used during some MRIs.

Emily Harris

Published Online: March 8, 2023. doi:10.1001/jama.2023.3200

Note: Source references are available through embedded hyperlinks in the article text online.