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India's COVID Crisis; Thrombosis in Children

Is a Variant to Blame for India's COVID Crisis?

Doctors, public and the news media in India point to the double mutant coronavirus variant, which is both more transmissible and more resistant to vaccines, as the reason behind the surge cases. Scientists say the data is inadequate, and other possible reasons have been cited for the country's second wave.

While India's worries have focused on the Indian B.1.617 variant, researchers outside of India state that the B.1.1.7 variant, which was found in Britain, may be a more prominent factor. It is now rising quickly in New Delhi.

Other more obvious factors could also account for the severity of the outbreak. Less than two percent of Indians are fully vaccinated. Moreover, after the first wave, people relaxed their public behavior.

(Source: New York Times)

1576: Thrombosis in children and adolescents hospitalized with COVID-19 or MIS-C

A multicenter retrospective cohort study evaluated the incidence of thrombosis in children and adolescents hospitalized with COVID-19 or multisystem inflammatory syndrome in children (MIS-C) and assessed its associated risk factors. The findings were published in the journal *Blood*.

From March 1 through August 15, 2020, investigators identified 853 hospital admissions among 814 patients with a positive COVID-19 test or MIS-C across 7 pediatric hospitals in 6 US states. Of these, 426 (50%) admissions were for symptomatic COVID-19, 138 (16%) for MIS-C, and 289 (34%) for asymptomatic SARS-CoV-2 infection.

Twenty one thrombotic events were noted. Patients with MIS-C were found to have the highest incidence of thrombotic events (6.5%), followed by symptomatic COVID-19 patients (2.1%), while the incidence rate was 0.7% among those with asymptomatic SARS-CoV-2 infection. Out of the 19 thrombotic events in patients with symptomatic COVID-19 or MIS-C, there were 11 cases of deep vein thrombosis, 3 pulmonary embolism, 3 intracardiac thrombosis, 1 acute ischemic stroke, and 1 cerebral sinovenous thrombosis.

Among patients with symptomatic COVID-19 or MIS-C, 89% of thrombotic events occurred in patients ≥12 years of age. The incidence of thrombotic events was 6.8% in patients with symptomatic COVID-19 or MIS-C ≥12 years, while it was 0.6% in those <12 years of age.

Anticoagulant thromboprophylaxis was used in 30% of symptomatic COVID-19 and 58% of MIS-C admissions in those patients. About 71% of thrombotic events not present on admission occurred despite thromboprophylaxis.

According to multivariable analysis, factors significantly associated with the incidence of thrombosis were age ≥12 years (odds ratio [OR] 16.84, 95% confidence interval [CI] 1.93-147.1, P = 0.011), cancer (OR 6.34, 95% CI 1.56-25.73,

P = 0.01), presence of a central venous catheter (OR 7.22, 95% 1.71-30.45, P = 0.007) , and MIS-C (OR 6.44, 95% CI 1.65-25.24, P = 0.008).

The mortality rate was 2.3% among patients with symptomatic COVID-19 or MIS-C, with a mortality rate of 28% reported in patients with symptomatic COVID-19 or MIS-C and thrombotic events.

The rate of venous thromboembolism in children admitted to US tertiary care hospitals in 2007 was estimated at 0.58% using the Pediatric Health Information System (PHIS) database, with those aged 12-18 years having the highest rate of 0.94%. The rate observed in the present study was much higher, especially in patients aged ≥12 years (6.8%) with symptomatic COVID-19 or MIS-C.

The rates of thrombotic events observed in the study, especially in the MIS-C population and those ≥12 years of age, are indicative that symptomatic COVID-19 and MIS-C are unique risk factors for thrombosis in hospitalized children, in spite of the fact that patients hospitalized with symptomatic COVID-19 tend to have a high prevalence of underlying medical conditions and that the age distribution of patients in this study is skewed toward older patients in comparison with the PHIS database.

The low rate of thrombotic events in children <12 years with symptomatic COVID-19 or MIS-C, and the factors associated with an increased risk (age ≥12 years, MIS-C, central venous catheter, and cancer) may help determine thromboprophylaxis strategies.

(Source: DG Alerts)