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Cerebral Venous Sinus Thrombosis in the U.S. Population, After Adenovirus-Based SARS-CoV-2 Vaccination, and After COVID-19

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Thrombosis has emerged as a major concern in patients with coronavirus disease-2019 (COVID-19) (1,2). Most recently, thrombotic events, particularly cerebral venous sinus thrombosis (CVST) were reported within days after receiving severe acute respiratory syndrome-coronavirus-2 (SARS-CoV-2) adenovirus-based vaccines (3). Initially, cases of CVST were reported in close succession to the use of the ChAdOx1 nCoV-19 vaccine (AstraZeneca), mostly in women of childbearing age, with many cases being associated with thrombocytopenia. Subsequently, 6 cases of CVST were reported in the United States with another adenovirus-based vaccine, Ad26.COV2.S vaccine (Johnson & Johnson), among women of childbearing age. CVST is a rare but potentially devastating disease (4). Therefore, this issue led to a temporary pause in use of the J&J vaccine in the United States and variable age-/sex-based restrictions for the AstraZeneca vaccine in other countries. Herein, we report the rate of CVST associated with these 2 vaccines based on publicly reported data, versus those occurring after COVID-19, and the estimated incidence rates in the US population.

We used the data from the UK Medicines and Healthcare Products Regulatory Agency (MHRA) (5),

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The authors attest they are in compliance with human studies committees and animal welfare regulations of the authors' institutions and Food and Drug Administration guidelines, including patient consent where appropriate. For more information, visit the Author Center.

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