For the Patient

The full report is titled: "Symptom flares after COVID-19 infection versus COVID-19 vaccines among youth with PANS/PANDAS." It is in the September-October 2023 issue of *Allergy Asthma Proceedings* (volume 44, pages 361 to 367). The authors are Maria D. LaRusso, Ed.D., and Cesar E. Abadia, D.M.D., D.M.Sc.

For the Patient is provided to the physicians so that the patients can better understand the language of modern medicine.

For the Patient is written by the editors (Bellanti, JA and Settipane, RA) and provided to practitioners so that patients can better understand the usefulness of new information resulting from medical research.

SYMPTOM FLARES AFTER COVID-19 INFECTION VERSUS COVID-19 VACCINES IN PATIENTS WITH PANS/PANDAS

Recent studies have suggested that the symptom flare rate of patients with autoimmune diseases, such as rheumatoid arthritis, is notably greater after SARS-CoV-2 infection than after immunization with COVID-19 vaccines. Less is known if a similar distinction occurs in patients with PANS/PANDAS, a group of autoimmune conditions that are characterized by the sudden onset of neuropsychiatric symptoms such as obsessive-compulsive disorder (OCD), severe anxiety, emotional lability, mood swings and tics. These conditions are believed to be caused by an abnormal immune response triggered by infections, particularly streptococcal infections. Health care providers and patients with PANS/PANDAS, therefore, confront difficult choices related to vaccine safety in deciding whether or not to receive COVID-19 vaccines. In a recent report, LaRusso and Abadia from the Departments of Human Development and Family Sciences and Medical Anthropology and the Human Rights Institute of the University of Connecticut, Storrs, CT, compared the frequency of symptom flares of children and young adults with PANS/PANDAS following COVID-19 infection or after the use of COVID-19 vaccines.

WHO OR WHAT WAS PROPOSED TO BE STUDIED?

Surveys were completed by 496 parents and/or caregivers of children with PANS/PANDAS, including questions about symptom flares following COVID-19 infection or after the use of COVID-19 vaccines. Participants were from several countries, including 70% United States, 11% Canada, 7% United Kingdom, 4% Australia, 3% Sweden, and 1% Italy, and a total of 4% from other countries in Europe, Asia, and South America.

HOW WAS THE STUDY DONE?

Among the children with COVID-19 infection (n = 178), 43% reported severe flares of PANS/PANDAS symptoms, 23% reported mild flares, and 30% reported no symptom flares. Among those who had received COVID-19 vaccines (n = 181), 65% observed no changes in PANS/PANDAS symptoms after the vaccine, 19% reported mild flares, and 15% severe flares. In addition, children who had recovered from PANS/PANDAS were significantly more likely to have no symptom flares following COVID-19 infection (n = 13 [92%]) and following vaccine receipt (n = 14 [100%]) than children currently managing the condition.

WHAT ARE THE LIMITATIONS OF THE STUDY?

Limitations of the study included the lack of information to calculate a response rate for the survey, the retrospective nature of the study, the possible self-selection biases introduced by families that were more severely affected by PANS/PANDAS, and an inadequate sample size for cross-national comparisons.

WHAT ARE THE IMPLICATIONS OF THE STUDY?

Given the higher frequencies of symptom flares and setbacks following COVID-19 infection than following COVID-19 vaccines, the study results support COVID-19 vaccination for most individuals with PANS/PANDAS. Nonetheless, further studies are required to fully assess risk-benefit considerations to provide a more personalized medicine approach to disease prevention in patients with PANS/PANDAS and other immune-based vulnerabilities. □