A high-risk antiphospholipid antibody profile matters in pediatric patients with antiphospholipid syndrome

November 13 2023

Credit: CC0 Public Domain

A new study by Hospital for Special Surgery (HSS) investigators has found that an initial high-risk antibody profile for antiphospholipid

syndrome (APS) tended to remain high in pediatric patients. The results were presented in a poster session at American College of Rheumatology (ACR) Convergence 2023.

"There are a lot of unanswered questions about how APS affects pediatric patients since evidence to date has been very limited," said Jheel Pandya, MD, a pediatric rheumatology fellow at HSS and lead author of the research.

"Our study reveals that an initial high-risk antiphospholipid antibody profile is unlikely to be transient in pediatric patients, indicating their risk of serious health problems remains elevated and they should be followed carefully."

APS is a rare autoimmune disorder in which antibodies made by the immune system, called antiphospholipid antibodies (aPL), attack proteins that bind the phospholipid cell walls of blood cells located on the inner layer of arteries and veins. The disorder increases the risk of dangerous blood clots inside blood vessels, strokes, and heart attacks, and can cause pregnancy problems.

For patients with symptoms, rheumatologists use three laboratory tests to evaluate the presence of aPL: lupus anticoagulant (LA), anticardiolipin antibody (aCL) and anti-beta-2-glycoprotein-1 antibody (aβ_2GPI). An international team of rheumatologists, including HSS investigators, recently published new criteria for classifying adult APS patients for research purposes using these tests, but there are not yet established criteria for classifying pediatric patients.

Dr. Pandya and colleagues analyzed electronic medical records for aPL-positive patients ages 10 to 18 who were treated at HSS between 2016 and 2022. They divided patients with initially positive results into high- and low-risk groups as follows: those with a positive LA test and/or

higher level aCL and aβ_2GPI antibodies into the high-risk group; and those with a negative LA test and/or lower levels of aCL and aβ_2GPI antibodies into the low-risk group.

The investigators assessed subsequent aPL results, as well as the demographic and clinical characteristics of patients with persistently positive aPL results reported at least 12 weeks apart.

The analysis revealed that aPL persisted for 25 of 27 patients (93%) in the higher-risk group. By comparison, aPL persisted for only seven of 15 patients (47%) in the lower-risk group.

Among 32 patients in either group with aPL results that remained positive over time, blood clots occurred in nine (28%) patients in the high-risk group, while none occurred in the low-risk group. For 26 patients who did not have persistently positive antibody results, none experienced blood clots, one had a skin rash, and two experienced migraines.

"The more we can learn about differences in APS development and progression in pediatric patients compared with adults, the more we can optimize their diagnosis and treatment," said co-author Karen Brandt Onel, MD, chief of Pediatric Rheumatology at HSS. "This study underscores the importance of continuing to follow pediatric patients with higher-risk profiles and transitioning them to adult care after the age of 18."

"Our results highlight the need for a large-scale, international effort to better understand how APS affects pediatric patients," said senior author Doruk Erkan, MD, MPH, a physician-scientist at the Barbara Volker Center for Women and Rheumatic Diseases, attending rheumatologist at HSS and professor of medicine at Weill Cornell Medicine.

"An international effort has been initiated to pool pediatric APS data and ultimately guide the development of classification criteria for pediatric patients." Dr. Erkan was co-principal investigator for the recently published 2023 ACR/EULAR Adult APS Classification Criteria.

More information: "The Clinical Relevance of Different Antiphospholipid Antibody Profiles in Pediatric Rheumatology Patients." ACR Convergence 2023 Abstract 0100.

Provided by Hospital for Special Surgery

Citation: A high-risk antiphospholipid antibody profile matters in pediatric patients with antiphospholipid syndrome (2023, November 13) retrieved 2 May 2024 from https://medicalxpress.com/news/2023-11-high-risk-antiphospholipid-antibody-profile-pediatric.html

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.