Co-infection, mild COVID-19 symptomology noted in two case reports
by Trisha Korioth, Staff Writer

Editor's note: So far, the majority of COVID-19 cases in children have been mild. The Centers for Disease Control and Prevention recently issued a health advisory describing multisystem inflammatory syndrome in children (MIS-C). Experts continue to monitor symptoms, demographics and treatment approaches of the rare but serious syndrome linked to COVID-19.

Two case reports in Pediatrics describe children who developed immune thrombocytopenia or Kawasaki-like hyperinflammatory syndrome and also tested positive for SARS-CoV-2.

Patients had IgG, IgM antibodies toward SARS-CoV2 A) erythema, edema B) petechial elements on feet C) cutaneous erythema D) petechial elements on feet. Courtesy of Pediatrics.

Both reports described an inflammatory response that the children developed in a later phase of viral infection or exposure. In the first report, two patients with Kawasaki-like hyperinflammatory syndrome had negative nasopharyngeal swab specimens. Because of the uncertainty of the cause of both cases, authors measured anti-S specific IgG antibodies to SARS-CoV-2. Both patients had moderate to high positive titers and a second confirmatory test had IgG and IgM antibodies towards SARS-CoV-2. In the second, a patient with immune thrombocytopenia and prior known exposure to SARS-CoV-2 was positive on a reverse transcriptase-polymerase chain reaction test.

One report described a novel phenotype in two children that they called "SARS-CoV-2 induced Kawasaki-like hyperinflammatory syndrome."

A 12-year-old boy and 7-year-old boy presented at the emergency department in Turin, Italy, within days of one another with persistent fever and abdominal pain, elevated C reactive protein, procalcitonin and low lymphocyte count. Both experienced late-phase severe inflammatory syndrome. Mucocutaneous involvement appeared.
Both then developed progressive thrombocytopenia, capillary leak syndrome, hepatomegaly and other symptoms. The patients improved after intravenous corticosteroid therapy, but in the final phase of illness developed what appeared to be myocarditis.

"We emphasize that heart function improved slowly; further follow-up will be needed in order to determine if heart function will fully recover," authors said.

Immune thrombocytopenia is a potential presentation of COVID-19, according to authors of a case report about a SARS-CoV-2-positive patient.

The report describes a 10-year-old girl, who presented at a Providence, R.I., emergency department with a rash, purple lesions in her mouth and new bruises.

"(The) patient was a well appearing, conversant girl, with oral examination notable for wet purpura. Skin examination showed petechiae concentrated on her lower extremities, chest and neck, and ecchymoses in the popliteal regions and shins," authors noted.

She was admitted with suspected immune thrombocytopenia to the hematology service, and received intravenous immunoglobulin, acetaminophen and diphenhydramine. She was discharged the following morning, and symptoms resolved two weeks later.

The report notes that it is important to recognize the association of immune thrombocytopenia with SARS-CoV-2 in children because immune thrombocytopenia presents differently in adults compared to children.

"This case underscores the need for clinicians to be mindful of high SARS-CoV-2 co-infection rates and mild COVID-19 symptomatology in children," authors concluded.