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LETTER TO THE EDITOR

Kikuchi–Fujimoto disease in a child who had a high suspicion of COVID-19 infection

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Dear editor,

We read with great interest the published case entitled "Kikuchi–Fujimoto disease following vaccination against COVID-19" written by Guan et al. [1]. These authors reported a 36-year-old woman who developed fever and cervical lymphadenopathy following the COVID-19 vaccination. She was diagnosed with Kikuchi–Fujimoto disease by histopathological findings on lymph nodes. Her lymphadenopathy resolved without treatment during a 2-month follow-up. In parallel with this case, we present a small child with generalized lymphadenopathy who has been diagnosed with Kikuchi–Fujimoto disease by lymph node biopsy findings after possible household contamination with COVID-19 infection. A 5-year-old boy was referred to us for enlarged cervical lymphadenopathy despite oral antibiotic use for at least 14 days. Positive family history of COVID-19 infection was recorded 5 weeks previously. PCR tests of the parents' nasopharyngeal swab samples were positive for SARS-CoV-2. At the time of the COVID-19 infection, the patient developed a fever and sore throat. His nasopharyngeal swab sample was negative for SARS-CoV-2 by PCR test. Five weeks later, he was admitted to our center for neck swellings. We detected multiple enlarged soft mobile posterior cervical, left axillary, and bilateral inguinal lymph nodes ranging in size between 2 and 5 cm on physical examination. His hemoglobin concentration (12.8 g/dL), mean corpuscular volume (78 fL), reticulocytes (1.1%), neutrophil count (2800/μL), and platelet level (280,000/μL) were within the normal ranges in our center. His ferritin (29 mg/dL), indirect bilirubin (0.4 mg/dL), and lactate dehydrogenase (221 IU/L) levels were found to be normal. The levels of erythrocyte sedimentation rate and C-reactive protein were normal. Coombs test and anti-nuclear antibodies were negative. Complement (C-3 and C-4) and total immunoglobulin levels were normal. Serological tests for the Epstein–Barr virus, Cytomegalovirus, Parvovirus-B19, and human immunodeficiency virus were also negative. No response to antibiotics was observed. His thoracoabdominal tomography showed multiple lymphadenopathies in the abdomen, axillary, and hilar regions. His axillary lymph node was surgically removed, and his pathology showed germinal centers surrounded by histiocytes, plasmacytoid dendritic cells, and karyorrhectic necrotic debris (Fig. 1). He was diagnosed with Kikuchi–Fujimoto disease. He is currently being followed up without treatment. At the time of writing, the patient's lymphadenopathies had gradually regressed within 2 months. He was later found to be positive for the anti-SARS-CoV-2 antibody. Although we could not demonstrate a positive SARS-CoV-2 PCR test, possible household contamination with COVID-19 infection and positive anti-SARS-CoV-2 antibody in addition to generalized lymphadenopathy all support the diagnosis of COVID-19 infection-associated Kikuchi–Fujimoto disease in our patient. Based on a literature review, Kikuchi–Fujimoto disease in association with COVID-19 has been described in five patients to date [1, 2]. Of them, three developed Kikuchi–Fujimoto disease after COVID-19 infection, and the remaining two developed Kikuchi–Fujimoto disease following COVID-19 vaccination. All reported cases were adolescents and young adults in contrast to our pediatric patient [1, 2]. All cases showed complete resolution, similar to our case. In light of the reported cases, COVID-19 may be a potential cause of Kikuchi–Fujimoto disease [1, 2]. Our experience suggests that histopathologic evaluation is important for distinguishing from malign diseases. As well, pediatricians should keep in mind COVID-19-related Kikuchi–Fujimoto disease in pediatric patients.

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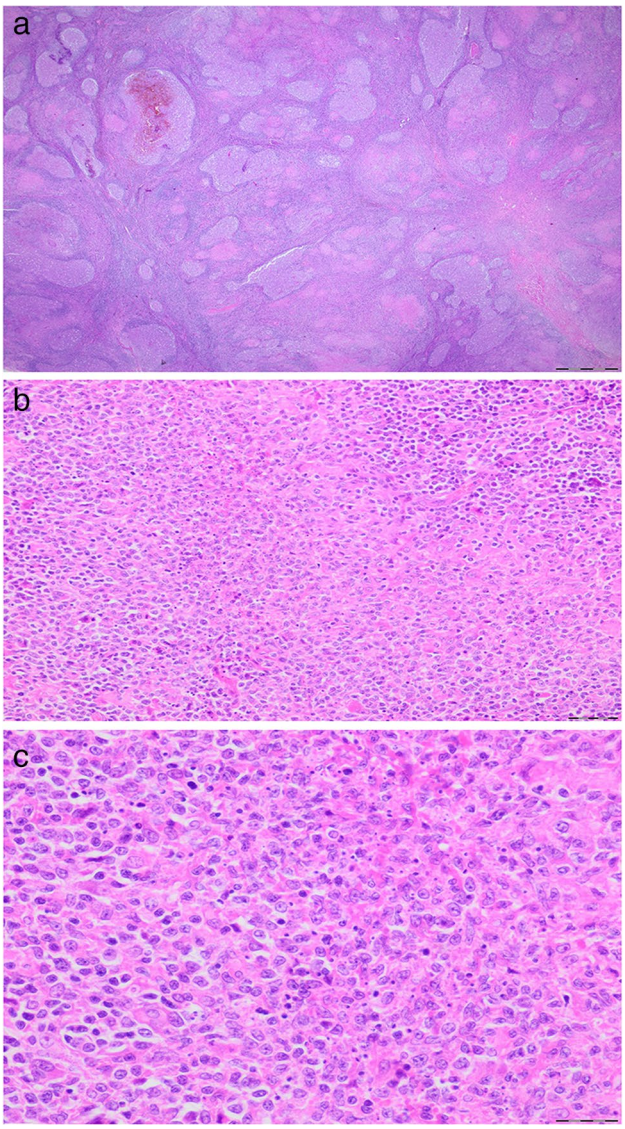

Fig. 1 Microscopic view of lymph nodes. **a** Large germinal centers and irregularly shaped, pale pink areas (hematoxylin and eosin (H&E) × 12.5 magnification). **b** Pale areas composed of histiocytes, plasmacytoid dendritic cells, and karyorrhectic necrotic debris (H&E × 200 magnification). **c** Pale areas composed of histiocytes, plasmacytoid dendritic cells, and karyorrhectic necrotic debris (H&E × 400 magnification)

Declarations

Ethics approval This article does not contain any studies with animals performed by any of the authors.

Consent to participate Informed consent was obtained from the patient and his parents.

Conflict of interest The authors declare no competing interests.

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