



Multisystem Inflammatory Syndrome in Clinically Mild Encephalitis/Encephalopathy with Reversible Splenic Lesion

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A 7-y-old boy presented with visual hallucinations on day 5 of fever. His medical history was unremarkable except for coronavirus disease 2019, 6 wk before the presentation. Physical examination revealed symptoms similar to Kawasaki disease, including left cervical lymphadenopathy, bilateral conjunctival injection (Fig. 1a), erythematous rash on the cheeks, inflamed lips, and strawberry tongue (Fig. 1b). He also exhibited visual hallucinations, slurred speech, and dilated coronary arteries on cardiac ultrasonography, and multisystem inflammatory syndrome in children (MIS-C) was diagnosed.

MIS-C worsened over 2 d despite immunoglobulin therapy (2 g/kg/d), and the patient became dyspneic with prominent pericardial effusion and pulmonary congestion (Fig. 1c). Persistent visual hallucinations, new-onset disorientation to time and people, and cytotoxic lesions of the corpus callosum (Fig. 1d–f) led to the diagnosis of clinically mild encephalitis/encephalopathy with a reversible splenic lesion (MERS). Methylprednisolone (30 mg/kg/d for 3 d) and another immunoglobulin (2 g/kg/d) resolved both fever and neurological abnormalities within 1 d. Kawasaki disease symptoms disappeared over several days. No neurologic or cardiac sequelae were noted.

The present case fulfills the typical symptoms of both MIS-C and MERS (Fig. 1a–f). Since interleukin (IL)-6 plays important roles in both MIS-C and MERS [1, 2],

IL6-mediated immune dysregulation might be a key pathophysiology in the present case. Initial combination immunotherapy (methylprednisolone with immunoglobulin) may be more effective than immunoglobulin alone in children with MIS-C complicated by MERS [3].

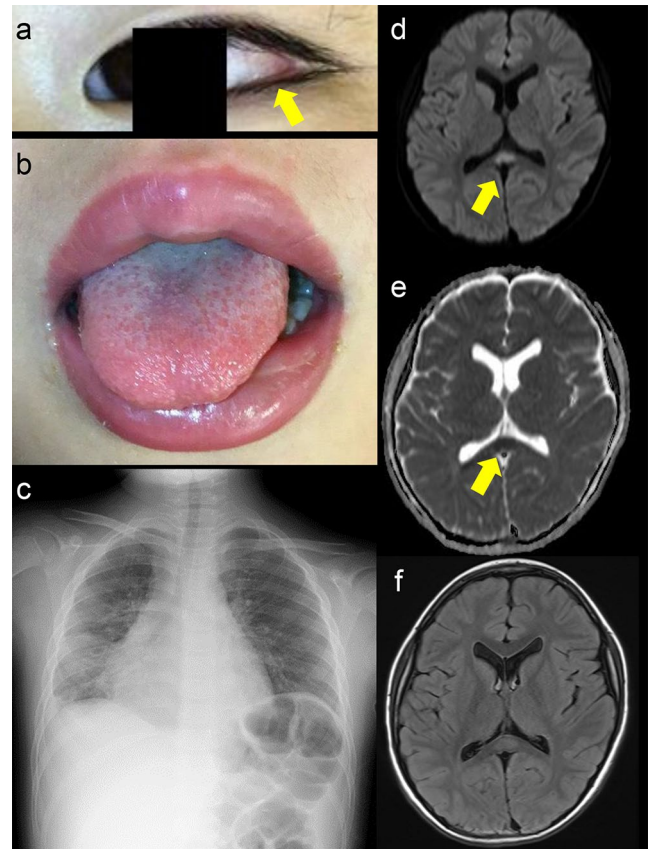


Fig. 1 The constellation of symptoms in a child with MIS-C complicated by MERS. **(a)** Bilateral conjunctival injection (*arrow*) and **(b)** inflamed lips and strawberry tongue on day 5. **(c)** Cardiomegaly and pulmonary congestion on day 7. **(d–f)** Brain magnetic resonance imaging on day 7 showing restricted diffusion in the splenium of the corpus callosum (*arrows*). **(d)** Diffusion-weighted imaging, **(e)** apparent diffusion coefficient mapping, and **(f)** fluid-attenuated inversion recovery imaging

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Declarations

Conflict of Interest None.

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