Kawasaki Disease with Mild Encephalitis/Encephalopathy with Reversible Splenic Lesion in a 2-Year-Old Girl

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To the Editor: Mild encephalitis/encephalopathy with a reversible splenic lesion (MERS) is a common acute encephalopathy in Japan [1]. It is usually caused by viruses such as influenza; however, it has recently been associated with Kawasaki disease (KD) [2].

A 2-y-old girl was diagnosed with KD on day 4. Blood examination revealed white blood cells (WBC) 8600/ μ L (neutrophils: 80.4%), platelets 275,000/ μ L, aspartate aminotransferase (AST) 80 IU/L, sodium 131 mmol/L, C-reactive protein (CRP) 9.28 mg/dL. On day 4, intravenous immunoglobulin (IVIG; 2 g/kg/d) and aspirin were administered. On the same night, she started speaking incoherently and had altered consciousness. On day 5, MERS was diagnosed based of brain magnetic resonance imaging (MRI) findings. Methylprednisolone (30 mg/kg/d) was administered for 3 d. She was afebrile on day 6, and her neurological symptoms improved on day 8. She was discharged on day 13 without coronary artery lesions (CALs) or neurological sequelae.

Serum (day 4, pre-IVIG) and cerebrospinal fluid (day 5, post-IVIG) concentrations of interleukin (IL)-6, IL-18, and tumor necrosis factor (TNF)- α were measured. Serum cytokines on day 4 showed IL-6, IL-18, and TNF- α levels of 154 pg/mL, 615 pg/mL, and 14.9 pg/mL, respectively. CSF cytokines on day 5 showed IL-6, IL-18, and TNF- α levels of 6.04 pg/mL, < 78 pg/mL, and < 2.24 pg/mL, respectively.

In recent years, a high level of IL-6 has been reported as a risk factor for CALs [3]. A previous study reported that the mean pre-IVIG IL-6 levels in patients of KD with CALs were

about three times higher than that in patients of KD without CALs (143.60 pg/mL vs. 52.90 pg/mL). Several studies have also reported that IL-6 in the CSF might be associated with MERS [4].

It could be considered that KD complicated with MERS has a higher risk of CALs. Further research on the pathogenesis and appropriate treatment of KD with MERS is required.

Declarations

Conflict of Interest None.

References

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