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LETTER TO EDITOR

Parvovirus-induced thrombocytopenia

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To the Editor,

Platelet count <150,000/μL is defined as thrombocytopenia. There are some degrees of thrombocytopenia classified by platelet count. The most common causes of thrombocytopenia are chronic liver diseases, immune thrombocytopenia, congenital platelet disorders, infections, bone marrow disorders, malignancy, and drugs.

Immune thrombocytopenic purpura (ITP) is caused by antibody–antigen reactions [1]. ITP can develop in the context of other disorders (secondary ITP). Some cases of ITP are associated with preceding viral infections or less commonly bacterial infections. Antibodies against viral antigens may cross-react with normal platelet antigens.

A 30-year-old man with a healthy history was admitted to the emergency room with skin rashes. The patient had no chronic disease and was not on medication. One week before he was admitted to the hospital, he had an upper respiratory flu-like infection. After that his body rashes appeared. During this period, he did not take any drugs. Upon first examination the patient did not have bleeding or any active symptom. He had skin rashes in all extremities. Blood samples revealed 5000/μL platelets, 15.6 mg/dL haemoglobin, and 6800/μL white blood cells. Pseudothrombocytopenia was excluded with peripheral blood smear. Kidney functions were in normal range at admission. Lactate dehydrogenase (LDH) was close to upper limit (292 u/L). Liver enzymes were in the normal range. At follow-up, the patient had epistaxis. He was transfused with one unit of platelet suspension. Platelet count did not increase enough after platelet replacement. We discarded other possible causes of thrombocytopenia. Many viral and bacterial antigens run including human immunodeficiency virus, hepatitis c virus (HCV), hepatitis b virus (HBV), epstein barr virus (EBV), cytomegalovirus (CMV), Herpes virus, *Helicobacter pylori*, Toxoplasma, Parvovirus B19, and Brucella. Only Parvovirus B19 IgM was positive among them. Then we administered intravenous immunoglobulin (IVIG) treatment with 1 g/kg/d dose for two consecutive days. After IVIG treatment, platelets increased to 40,000/μL in 2 days. His skin rashes disappeared 3 days after IVIG treatment. Platelet counts increased simultaneously and reached normal range in ~1 week.

There are some cases in the past which showed a possible association between Parvovirus B19 and immune thrombocytopenia [2]. Most of these cases were seen in childhood or immune compromised patients [3,4]. Our case is a 30-year-old man and he did not have immunosuppression.

The most commonly used agents for initial treatment of ITP are glucocorticoids and intravenous immunoglobulin. Intravenous anti-RhD is a type of immune globulin which may be effective in patients who have Rh+ blood group and do not have splenectomy history. We preferred IVIG treatment rather than glucocorticoids because the platelet count was required to increase rapidly for the recovery of the patient who had epistaxis likely to recur.

Parvovirus B19 is a rare cause of thrombocytopenia especially for nonimmuno suppressed adult patients. We stress the noncommon viral aetiology of thrombocytopenia with

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this case report. Clinicians should keep in mind that viruses such as ParvovirusB19 might be a possible cause of thrombocytopenia in healthy adults.

Conflicts of interest

The authors have no conflicts of interest to declare.

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