Acute Immune Thrombocytopenic Purpura in a 90-year-old Woman Treated with Immunoglobulin as well as Glucocorticoid

Key words: acute, immune thrombocytopenic purpura (ITP), the elderly, immunoglobulin, platelet-associated IgG (PAIgG)

Acute immune thrombocytopenic purpura (ITP) is common in children and accounts for 90% of the pediatric cases of thrombocytopenia induced by immunologic mechanisms. In contrast, most adult patients with ITP present with a more indolent form of thrombocytopenia that may persist for several years and is referred to as chronic ITP. Women aged 20 to 40 are afflicted most commonly (1). It is quite rare for acute ITP to occur in an aged individual (2). Here, we describe a 90-year-old woman who developed acute ITP.

She was diagnosed with rheumatoid arthritis (RA) by a local internist some 50 years previously. Disease activity of her RA had become quiescent for in recent years and she had been living in an elderly care facility without receiving specific treatment for RA. Routine measurement of complete blood count was normal in August 2001. On December 30, she noticed that petechiae developed on her lower extremities in the wake of mild fever, fatigue, and sore throat. On January 9, 2002, the home staff discovered petechiae and tarry stool when they helped her defecate at the lavatory. She was immediately transferred to our hospital to determine the cause of these symptoms. Physical examination revealed petechiae on her limb as well as hemorrhage in conjunctivae and oral mucosa. There was no articular inflammation except for hallux valgus of her right toe. Laboratory findings demonstrated no hematological abnormalities except for remarkable thrombocytopenia (9,000/mm³), normal blood chemistry other than extremely elevated platelet-associated IgG (PAIgG) of 10,240 ng/10⁷ platelets (normal range: 9–25), and macroscopic hematuria. Tests for rheumatoid factor, anti-double stranded DNA antibody, and anti-Sm antibody were all negative. Serum complement levels were normal. Bone marrow examination showed hypercellularity with an increased megakaryocytic lineage and normal morphological appearances.

Based on these findings, she was diagnosed with acute ITP and prednisolone (PSL) 0.7 mg/kg/day was initiated immediately. In addition to PSL, a large amount of immunoglobulin (300 mg/kg/day for 5 days) was injected intravenously because of continuous bleeding with progressively increasing tarry stool and purpura. She responded to these treatments and her platelet count gradually increased and recovered to a normal level by 10 days. The amount of PSL was gradually tapered. After three weeks from the initiation of treatment, the titer of PAIgG decreased dramatically to 42.1 ng/10⁷ platelets. She contracted bacterial pneumonia during the treatment which was cured by the administration

Table 1. Acute Immune Thrombocytopenic Purpura in Elderly Patients

<table>
<thead>
<tr>
<th>Reporters</th>
<th>Year</th>
<th>Reference</th>
<th>Age</th>
<th>Sex</th>
<th>Preceding upper respiratory illness</th>
<th>Platelet counts at initial presentation (/mm³)</th>
<th>Clinical manifestation</th>
<th>Initial treatment</th>
<th>Duration of recovery from thrombocytopenia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Murooka, et al</td>
<td>1989</td>
<td>3</td>
<td>82</td>
<td>man</td>
<td>na</td>
<td>12,000</td>
<td>Petechiae and Purpura</td>
<td>PSL 50 mg/day+AZ A 100 mg/day</td>
<td>1 month</td>
</tr>
<tr>
<td>Takashima, et al</td>
<td>1993</td>
<td>2</td>
<td>89</td>
<td>man</td>
<td>na</td>
<td>28,000</td>
<td>Petechiae and oral mucocutaneous bleeding</td>
<td>m-PSL 1,500 mg/day for 3 days</td>
<td>2.5 months</td>
</tr>
<tr>
<td>Kurabayashi, et al</td>
<td>1998</td>
<td>4</td>
<td>80</td>
<td>woman</td>
<td>+</td>
<td>10,000</td>
<td>petechiae and epistaxis</td>
<td>PSL 45 mg/day</td>
<td>7 days</td>
</tr>
<tr>
<td>Nagai, et al</td>
<td>2001</td>
<td>5</td>
<td>71</td>
<td>man</td>
<td>na</td>
<td>17,000</td>
<td>No symptoms</td>
<td>No therapy</td>
<td>2 months</td>
</tr>
<tr>
<td>Present case</td>
<td></td>
<td></td>
<td>90</td>
<td>woman</td>
<td>+</td>
<td>9,000</td>
<td>Petechiae and gastrointestinal bleeding</td>
<td>PSL 25 mg/day+IG 10 g/day for 5 days</td>
<td>10 days</td>
</tr>
</tbody>
</table>

na: information not available, AZA: azathioprine, IG: immunoglobulin, m-PSL: methylprednisolone, PSL: prednisolone.
of cefozopran. Her platelet count did not decrease during an episode of this pneumonia. She has been living symptom-free in a home for the elderly for more than a year.

The present patient developed acute-onset of ITP at the age of 90 years characterized by petechiae, mucocutaneous bleeding, abrupt reduction in platelet count following upper respiratory infection, and prompt response to treatment without recurrence. Symptoms of upper respiratory infection she contracted were so mild that no medication was given to her, which ruled out drug induced-thrombocytopenia.

In general, acute ITP is rare in adults, especially among the elderly, and accounts for only <10% of postpubertal patients with ITP (1). To our knowledge, there are only four reports of acute ITP which occurred in an elderly patient and the present case is the oldest (Table 1) (2–5). Initial management and response to treatment among the reported cases including ours were quite variable. Further accumulation of cases is needed to characterize the clinical features of acute ITP in elderly patients. Although acute ITP is quite unusual in the elderly, it still needs to be considered as a differential diagnosis when a patient develops an abrupt decrease in the platelet number.

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References