Patients with antiphospholipid syndrome are often complicated with venous, arterial and small vessel thrombosis and/or pregnancy morbidities in the presence of so-called antiphospholipid antibodies (aPLs), which recognize phospholipid-binding proteins represented by β2-glycoprotein I (1). aPLs have been shown to be risk factors for venous and/or arterial thrombosis. Although the prevalence and clinical impact of aPLs in patients with systemic lupus erythematosus (SLE) has been extensively investigated, studies describing these issues in cases of other autoimmune diseases or idiopathic/immune thrombocytopenic purpura (ITP) are relatively limited in number.

Thrombocytopenia is a clinical feature of patients with antiphospholipid syndrome (APS), although it was excluded from the classification criteria for APS (2, 3). Therefore, patients with thrombocytopenia in the presence of aPLs can be classified as having ITP. Actually, aPLs are frequently found in patients initially diagnosed with ITP and are associated with future thrombosis (4). A subgroup of patients with ‘aPL-associated thrombocytopenia’ should be taken into account as having potential thrombotic risks (5).

From a practical aspect, many commercially available kits for measuring aPLs have cut-off values determined based on a comparison between patients with APS and healthy controls. However, as a predictor of thrombotic events, these cut-off values might be better established in patients with APS.

**Table.** Prevalence of Antiphospholipid Antibodies in Patients with Idiopathic/immune Thrombocytopenic Purpura and the Rate of Thrombosis.

<table>
<thead>
<tr>
<th>Study</th>
<th>aPL (+)</th>
<th>aPL (-)</th>
<th>Thrombosis Rate</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diz-Kucukkaya et al. (4)</td>
<td>31</td>
<td>51</td>
<td>(60.1%)</td>
<td>0.0004</td>
</tr>
<tr>
<td>Habe et al. (7)</td>
<td>10</td>
<td>76</td>
<td>(40.0%)</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Atsumi et al. (5)</td>
<td>51</td>
<td>13</td>
<td>(60.8%)</td>
<td>0.0003</td>
</tr>
</tbody>
</table>

aPL: antiphospholipid antibodies, APS: antiphospholipid syndrome, ITP: idiopathic/immune thrombocytopenic purpura, APS manifestations include thrombosis or pregnancy morbidities.
SLE, a disease with a higher prevalence of aPLs. We previously developed an antiphospholipid score based on three lupus anticoagulant assays and six enzyme-linked immunosorbent assay (ELISAs) for aPLs as well as a more practical partial antiphospholipid score that only requires aPL tests included in the classification criteria for APS (6). Because these scores have both diagnostic value and positive predictive value for thrombosis in cases of autoimmune diseases, such tools may be a clue to solve the above-mentioned problems with aPL assays.

In the same issue of Internal Medicine, Habe and colleagues describe the usefulness of aPLs in Japanese patients with lupus, scleroderma and other systemic autoimmune diseases as well as those with ITP (7). Using commercially available kits, the authors confirmed an association between aPLs and SLE, other systemic autoimmune diseases and ITP. Interestingly, the prevalence of thrombosis in the aPL-positive ITP patients was similar to that previously found in Caucasian populations (Table). Here, the importance of measuring aPLs in those with thrombocytopenia has been demonstrated in the Japanese population.

Habe et al. also proposed altered optimal cut-off values for predicting thrombotic events according to the underlying disease. As predicted, optimal cut-off values for lupus anticoagulant, anti-cardiolipin IgG and anti-cardiolipin-β2-glycoprotein I complex IgG were higher in patients with SLE. Such an approach would also provide alternative clues for improving the predictive value of each aPL test for thrombosis.

Although standardization of many aPL assays has been attempted, with enormous efforts taking a long time, the issue proposed in the present study should be taken into account along the road to establishing standardized aPL assays.

Author’s disclosure of potential Conflicts of Interest (COI)
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References

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