Liver Damage after Danazol and Glucocorticoids for Chronic Idiopathic Thrombocytopenic Purpura (ITP)

To the editor: Danazol is a useful drug for chronic idiopathic thrombocytopenic purpura (ITP) which fails to respond to glucocorticoids and splenectomy (1, 2). However, it was reported that danazol frequently causes liver damage in patients with ITP (3, 4). In contrast, the frequency of liver damage in patients with endometriosis is markedly lower than that in patients with ITP (5).

To elucidate the reason for this discrepancy, we compared the incidence of liver damage due to danazol between 14 patients with chronic ITP treated with glucocorticoids and danazol and 88 patients with gynecological diseases such as endometriosis treated with danazol alone. The daily doses of danazol in patients with ITP and in those with gynecological diseases were 380.0±40.0 (±SD) and 414.3±51.5 (±SD), respectively. The administration period of danazol was 46.5±15.8 (±SD) days in patients with ITP and 57.1±12.8 (±SD) days in patients with gynecological diseases. There was no statistically significant difference in the dose or administration period of danazol between these two groups.

The incidence of liver damage in patients with ITP and in those with gynecological diseases was 85.4% and 14.8%, respectively. These findings suggest that glucocorticoids increase the incidence of liver damage due to danazol. Although the mechanism of liver damage due to danazol is unclear, several interpretations of our results can be considered on the basis of previous reports. It has been reported that liver dysfunction occurs in all patients administered large doses of anabolic steroid (6). Our results might be due to an effect of glucocorticoids on the clearance of danazol, similar to the decreased clearance of glucocorticoid caused by contraceptive steroid. The patients with ITP were treated with a large dose of glucocorticoid before the administration of danazol. It is well known that large doses of glucocorticoid cause fatty liver. Our results might be due to the possibility that subclinically fatty liver is a baseline disease in the patients with ITP.

It is necessary to be aware of the potential of inducing liver damage when prescribing glucocorticoids together with danazol.

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References


Table 1. Abnormal Liver Function with Danazol and Glucocorticoids

<table>
<thead>
<tr>
<th>Condition</th>
<th>Danazol alone (n=88)</th>
<th>Danazol+glucocorticoids (n=14)</th>
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<tbody>
<tr>
<td>Elevated SGPT</td>
<td>6.8 (6)</td>
<td>35.7 (5)</td>
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<tr>
<td>Elevated LDH</td>
<td>8.0 (7)</td>
<td>42.6 (6)</td>
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<tr>
<td>Elevated SALP</td>
<td>0.0 (0)</td>
<td>7.1 (1)</td>
</tr>
<tr>
<td>Total</td>
<td>14.8 (13)</td>
<td>85.4 (12)</td>
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