A comparative evaluation on nonspecific immunoparameters and CEA as a tumor marker in urogenital cancer patients

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Numerous literatures have been documented concerning CEA as a tumor marker and immunoparameters in the cancer patients.

These reports may be theoretically acceptable, but it seems questionable whether they are clinically applicable or not.

In this context, we have studied various items considered as immunoparameters in the urogenital cancer patients and obtained some findings as described below.

The peripheral blood from the patients suffering from the urogenital carcinoma was taken and subjected for various immunoparameters determination after confirming the definite clinical diagnosis after hospitalization.

Moreover, the urogenital cancer patients were classified into T classification by organs (bladder, prostate and kidney). They were classified into metastatic and non-metastatic groups for the further investigation.

Yata\(^1\), et al. had reported that Con A induced suppressor T cells better than PHA, we have investigated from the standpoint that Con A/PHA reactivity ratio was consistent well with clinical pictures. The predominance of PHA over Con A became reversed with advanced cancer. Such reversion seemed to play an important role clinically in the prediction of prognosis and observation of the course of therapy in cancer patients\(^*\)\(^2\)\(^3\).

When T cell subpopulation was examined by the statistical analysis of our data, measurements of T and B cells showed large dispersion probably depending on infection and other factors in cancer patients and no significant difference was noted. Moreover, no theoretically acceptable values were obtained for individual data. However, IgGFCR\(^+\) T cells showed a tendency to increase with advanced cancer, reflecting suppressor T cells.

Accordingly, both T and B cells were considered to be inadequate for clinical use as immunoparameters and therefore, these were not discussed hereafter.

One hundred thirty three cases including the control are subjected for the further...
study in virtue of the immunoparameters of classifications by pT and various organs of primary site of carcinomas.

No significant difference in results of the calibrated immunoparameters are obtained comparing to the instances of urogenital carcinomas and instances studied from each organs.

Precisely, however, the CEA is elevating as the advanced cancer and is markedly encountered in urinary bladder tumor and prostate, however, the elevation is less prominent in renal cell carcinomas⁹. It was known that each item shows no evident variation in early stages (T₁ and T₂) of solid urogenital cancer with no severe systemic invasion, but shows marked variation in more advanced stages (T₃ and T₄).

When urogenital cancer patients were examined as a whole and by organs, each immunoparameters showed the same tendency of variation. In early stages (T₁ and T₂), such immunoparameters varied almost within normal limits, but they varied markedly in more advanced stages (T₃ and T₄) (Fig. 1).

As a matter of fact, the cases with remote metastasis, the alteration of the immunoparameter is striking. Similar tendency is also observed in recurrence of the tumor as well.

The fact may indicate the possibility that the abovementioned method may be serve as

Table 1 Nonspecific immunoparameters and tumor marker CEA against cancer bearing hosts

<table>
<thead>
<tr>
<th>Items</th>
<th>Normal value</th>
<th>Advanced cancer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lymphocyte count</td>
<td>25% (1600-2000)</td>
<td></td>
</tr>
<tr>
<td>PPD skin test</td>
<td>10 mm/48 H</td>
<td></td>
</tr>
<tr>
<td>PHA skin test</td>
<td>10 mm/24 H</td>
<td></td>
</tr>
<tr>
<td>Lymphocytoblastogenesis (reactive rate) Con A/PHA</td>
<td>less than 1.0</td>
<td>1.0 over</td>
</tr>
<tr>
<td>IgGFcR+ T cell (T₇)</td>
<td>5~8%</td>
<td>8% over</td>
</tr>
<tr>
<td>CEA (Sandwich)</td>
<td>less than 2.5 µg/ml</td>
<td>2.5 over</td>
</tr>
</tbody>
</table>
one of the most versatile non-specific immunoparameters for judging the diagnosis, biological behavior and efficacy of the therapeutic appears.

The Table 1 illustrates the clinically applicable immunoparameters being used in our clinics (Table 1).

It is, of course, inadequate to perform clinical evaluation of cancer patients on the basis of only one parameter, but combination of at least two or three parameters in considered to be useful for this purpose.

References


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