Arterial Embolization for Hepatoma

In other 11 out of 20, cancer cells had extensively damaged, despite the presence of small number of viable cancer cells.

Preoperative hyperthermia combined with chemotherapy and irradiation is highly effective, and shows great promise for treating patients with esophageal carcinoma.

REFERENCES


6. Comparative Study of Therapeutic Effects of Transcatheter Arterial Embolization and of Intra-Arterial one Shot Injection Therapy Against Hepatocellular Carcinoma

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The therapeutic effects of transcatheter arterial embolization (TAE) in 63 patients with hepatocellular carcinoma (HCC) were compared with those of intra-arterial one shot injection therapy using anticancer drugs (one shot) in 51 cases. Adding 15 cases of systemic administration of anticancer drugs and 36 cases with no therapy, the survival rate of the four groups was compared.

In the comparison of effects on the TAE group and on the one-shot group, improvement of subjective symptoms, elimination of jaundice, decrease of serum α-fetoprotein value (AFP), and reduction of tumor were used as the indices.

Improvement of subjective symptoms was noted in 10 out of 11 cases (91%) in the TAE group, and in 7 out of 17 cases (41%) in the one-shot group, and their difference was statistically significant (P < 0.05) (Fig. 1). Elimination of jaundice was observed in 5 out of 16 cases (31%) in the TAE group, and in 3 out of 18 cases (17%) in the one-shot group; the levels were low in both groups. Decrease of serum AFP was noted in 32 out of 34 cases (94%) in the TAE group, and in 10 out of 27 cases (37%) in the one-shot group (P < 0.001).

Reduction of tumor was evaluated by ultrasonography, computed tomography, angiography, hepatoscintigraphy and palpation. Of the 74 cases studied, reduction of tumor after therapy was noted in 34 out of 42 cases (81%) in the TAE group, and 8 out of 32 cases (25%) in the one-shot group (P < 0.001).

Next, by classifying the TAE group and one-shot group according to Karnofsky's criteria, the therapeutic effects were comprehensively compared. In this evaluation, as the objective findings, reduction of tumor, decrease of serum AFP and elimination of jaundice were used as the indices.

Persistence of improvement of subjective symptoms and objective findings for more than a month, that is, improvement to Karnofsky's category 1-A or better, was noted in 40 out of
Table 1. Therapeutic effect evaluation by Karnofsky’s criteria

<table>
<thead>
<tr>
<th>Karnofsky criteria</th>
<th>TAE</th>
<th>One shot</th>
<th>TAE</th>
<th>One shot</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>No. of patients</td>
<td>Prognosis (months)</td>
<td>No. of patients</td>
<td>Prognosis (months)</td>
</tr>
<tr>
<td>O - O</td>
<td>6</td>
<td>6.0±5.8</td>
<td>21</td>
<td>4.9±1.7</td>
</tr>
<tr>
<td>A</td>
<td>1</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>1</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>4</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I - A</td>
<td>25</td>
<td>17.2±9.3</td>
<td>7</td>
<td>10.8±10.1</td>
</tr>
<tr>
<td>B</td>
<td>13</td>
<td>3</td>
<td></td>
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</tr>
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<td>C</td>
<td>2</td>
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52 cases (77%) in the TAE group, and 10 out of 41 cases (24%) in the one-shot group (P < 0.001) (Table 1). When the survival period was compared between the two groups in each category, there was almost no difference up to category 0-C. However, in the cases improved to category 1-A or better, the survival period was longer in the TAE group.

The cumulative survival rate was compared among the four groups: TAE group, one-shot group, systemic administration group and no therapy group. As a result, in the TAE group, the one-year survival rate was 62%, and the two-year survival rate was 42% (Fig. 2). In the one-shot group, 18% of the 36 patients without portal obstruction survived one year and 12% survived two years, while 15 patients with portal obstruction all died within six months. When the survival rates of the TAE group and one-shot group (without portal obstruction) were compared, a significant difference was noted at 6, 12 and 18 months (respectively, P < 0.001, P < 0.001, P < 0.01). In the group with systemic administration of anticancer drugs, 20% survived one year and 6.7% two years, and the longest record was 3 years and four months in a case given FT-207. In the no therapy group, only two patients survived a year, but both died within two years.

Hence, the TAE was excellent in the degree of improvement of clinical findings as compared with one shot, and its prognosis was better than that of one-shot and other medical treatments.

Fig. 2. Survival rate in each group.

7. Intratumoral Injections of *Nocardia Rubra*-Cell Wall Skeleton for Hilar Type Lung Cancer in Humans and Lewis Lung Carcinoma in Mice

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Transbronchofiberscopic intratumoral injections of *Nocardia rubra*-cell wall skeleton (N-CWS) were carried out in patients with hilar type lung cancer in combination with anticancer chemotherapy as one of multidisciplinary cancer treatments. Twenty-three patients consisted of 14 cases of squamous cell carcinoma, 8 small cell carcinoma and 1 large cell carcinoma received intratumorally 0.5 mg of N-CWS in different sites of the circumference of tumor, at intervals of 1 to 2 weeks according to the method of Hayata et al.1) For clinical stage, there were 1 case in stage II, 5 in stage III and 17 in stage IV. Combined chemotherapy used was pepleomycin.