A DNA INDEX STUDY OF TWELVE NEUROBLASTOMA ASSOCIATED WITH OPSOCLONUS-MIOCLONUS SYNDROM

Neuroblastoma are embryonal tumors of the sympathetic nervous system and the most common extracerebral solid tumors of infancy and childhood, about 7% of all paediatric tumors.

Neuroblastoma have a uniformly stage I or II without paraneoplastic tumors seen in neuroblastic tumors.

The OMS syndrome(OMS) with > 18 syndrome(OMS 18 months) has been classified as follows:

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Localization</th>
<th>Age</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>OMS</td>
<td></td>
<td>&lt;18</td>
<td>32</td>
</tr>
<tr>
<td>ATAXIA</td>
<td></td>
<td>&gt; 18</td>
<td>22</td>
</tr>
</tbody>
</table>

DNA index has been studied by static cytometry based on Feulgen reaction. Then, Integrated Optical Density (IOD) has been quantified with “Image-Pro Plus 6.0” programme. IOD is proportional to DNA amount. Each tumor DNA index has been obtained with the relation between 500 neuroblastic cell nucleus IOD average and at least 50 lymphocyte (diploid cells) nucleus IOD average.

In order to obtain images, “Olympus ProRes C10plus of Jenoptik Laser Microscope” (above) and informatic programme “Progress Capture Pro 2.1.” (below) were used.

According to DNA INDEX (ID):
- DIPOIDY ID: 1-1,19
- TRIPLOIDY ID: 1,20-1,74
- TETRAPLOIDY ID: 1,75-2,19

The aim of this study is compare ploidy between tumors related with OMS and tumors that were registered as primary tumors in DP-UV during the first semester in 2012.

RESULTS

<table>
<thead>
<tr>
<th>Age</th>
<th>Total</th>
<th>%D</th>
<th>%Tr</th>
<th>%Te</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;18 months</td>
<td>32</td>
<td>9</td>
<td>29%</td>
<td>21</td>
</tr>
<tr>
<td>&gt; 18 months</td>
<td>22</td>
<td>6</td>
<td>27%</td>
<td>16</td>
</tr>
</tbody>
</table>

Table 3 Number of control cases in groups according to age and ploidy. It is shown absolute number and percentage in each age group. D: Diploidy (2n), Tr: Triploidy (3n), Te: Tetraploidy (4n).

<table>
<thead>
<tr>
<th>Age</th>
<th>Total</th>
<th>%D</th>
<th>%Tr</th>
<th>%Te</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;18 months</td>
<td>5</td>
<td>0</td>
<td>0%</td>
<td>5</td>
</tr>
<tr>
<td>&gt; 18 months</td>
<td>7</td>
<td>0</td>
<td>0%</td>
<td>7</td>
</tr>
</tbody>
</table>

Table 4 Number of control cases in groups according to age and ploidy. It is shown absolute number and percentage in each age group. D: Diploidy (2n), Tr: Triploidy (3n), Te: Tetraploidy (4n).

Tumor ploidy in our cohort of patients with neuroblastic tumors and OMS are homogeneously triploid (3n).

CONCLUSION

BIBLIOGRAPHY


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