Reviewer's report

Title: Prognostic value of hematogenous dissemination and biological profile of the tumor in early breast cancer patients. A prospective observational study

Version: 2 Date: 23 December 2010

Reviewer: Fayna Armas Serrano

Reviewer's report:

Discretionary Revisions

1. Follow up of patients: The authors describe the follow-up mentioning “visits included a physical examination, in which particular attention was placed on lymph node evaluation and identification of metastasis”.
   
a. Did they also determined tumoral markers? Which procedures did they employ to assess distant metastases: bone scintigraphy, CT, ultrasound…?

2. Results:
   
a. At the end of the second paragraph there is a comment about the drainage of the tracer to the internal mammary chain: “Internal mammary drainage occurred in 20 patients”. How many sentinel nodes per patient were seen at this location? Did the surgeon find all of them? It could be described as well as authors do with the axillary region.

b. The fifth paragraph refers to the table 2. In the following phrase: “(...) the SLN was negative in 18 patients and was positive in 5 patients (...)", the word “SLN” should be replaced by “lymphatic involvement”, as the cited table is referring to all cases with nodal involvement including those which underwent complete lymphadenectomy due to an absence of drainage (total 29, and no 27).

   In the same paragraph the authors say “Thus, only 5 patients (17%) tested positive in both SLN and bone marrow biopsies (...).” We think the word “SLN” should be replaced by “nodal involvement”. In addition, the percentage does not represent how many patients present both events, since it is referred only to the patients with lymphatic involvement (29) and not to the total of the patients of the study (104).

   This table could also be completed by adding the total of events reported, as follows:

<table>
<thead>
<tr>
<th>BM+</th>
<th>BM-</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>LI+</td>
<td>5</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>(4,8%)</td>
<td>(23%)</td>
</tr>
<tr>
<td>LI-</td>
<td>18</td>
<td>57</td>
</tr>
<tr>
<td></td>
<td>(17,3%)</td>
<td>(54,8%)</td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
<td>81</td>
</tr>
</tbody>
</table>

   This way the reader can see the total of patients the percentage refers to, and reflects the exact percentage of patients who presented one, both or none
condition.
To finish the comments on this table; It’s supposed the abbreviation “ns” corresponds to “non significant”? It is not mentioned on the manuscript, neither at the legend.
c. In the seventh paragraph, the percentages calculated for the treatment of the patients are wrong: 71+29+12 are 112, and not 100. We suggest to recalculate them including patients with sequential combination of the treatment a part of the total of patients. In the same paragraph it is commented “cancer related deaths occurred in 4 patients” whereas in the corresponding table (n.4) there are reported 8 deaths, without any specification about which of them were cancer related: Were cancer related deaths those with nodal and bone marrow involvement or not?.

Minor Essential Revisions

The author can be trusted to make these. For example, missing labels on figures, the wrong use of a term, spelling mistakes.

1. In some places of the manuscript including the tables, the authors mention the “Bone Marrow involvement” abbreviated as BM, and in other places they mention the “Disemination Tumor Cells” (DTC). We suggest to unify both terms as they are referred to the same concept: this action will simplify the lecture of the paper.

2. Other little suggestion is referred to table 4. It could be better for the reader if the authors change the order of the columns following the same scheme adopted for table number 3, also including the total of patients with every condition (n=75, etc).

3. At last, we think the term “Incidence” fits better than “prevalence” to the concept of the presence of bone metastases at the moment of the diagnosis.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:
I declare that I have no competing interests