Acceptable Strategies for Dealing With Hereditary Breast/Ovarian Cancer Risk

Since the breast cancer genes BRCA1 and BRCA2 were identified, it has become possible to determine the gene carrier status in women. However, no conclusive data are available so far about the efficacy (1) of the three main strategies for managing hereditary breast and ovarian cancer, i.e., prophylactic surgery, screening, and chemoprevention with tamoxifen (2). In situations involving major uncertainty, the a priori acceptability of the available strategies is one of the main criteria used in setting up preventive programs. Although Lerman et al. (3) have reported that, among 12 unaffected women with a BRCA1 germline mutation, the declared acceptability rate of prophylactic mastectomy and oophorectomy was 17% and 33%, respectively, no comparative studies have been carried out so far on the acceptability of the various strategies.

To address this issue, we presented all the patients attending cancer genetic clinics during a 1-year period with an explanatory letter and a questionnaire to be filled in before their consultation. Four strategies were described: mammographic screening, daily chemoprevention, prophylactic oophorectomy, and prophylactic mastectomy. The subjects had to choose between five mutually exclusive responses: full agreement, agreement, no opinion, against, and ally exclusive responses: full agreement, agreement, no opinion, against, and ally exclusive responses: full agreement, agreement, no opinion, against, and ally exclusive responses.

Among the 218 eligible persons, 208 (95.4%), including 179 women (86%) and 29 men (14%), with a mean age of 45.5 years and 45.3 years, respectively, filled in the questionnaire. Almost 40% of the subjects had cancer: 69 women (70% with breast cancer) and 14 men.

One important result that emerged was the graded pattern of acceptability of the various strategies. Substantial differences were found to exist in this respect (Table 1), whereas no statistically significant differences were observed between the women’s and the men’s responses (P > .10) or between the healthy group and the cancer group (P > .10). Mammographic screening turned out to be the most acceptable procedure, with a score of 97% and 88% in women and men, respectively. Chemoprevention was rated as being fairly acceptable, since 57% and 62% of women and men, respectively, agreed with this option. In contrast, prophylactic oophorectomy and mastectomy were found to have the lowest rates of acceptability: 22% of women and 17% of men agreed with the former, and only 10% of women and 8% of men agreed with the latter. It is interesting that, while clinicians have been reported to be in agreement with oophorectomy in the setting of genetic disease (4), the acceptability of this procedure rated low in our study. Chemoprevention, which has given rise to much controversy among physicians (5), seems to appeal to patients more than prophylactic surgery. Our data show that mammography has a very high rate of acceptability, although population-based studies (6) have indicated that this approach decreases the relative risk of mortality by only about 30%.

Because public health effectiveness depends on both the efficacy and the acceptability of medical strategies, a combination of mammography and chemopreventive procedures, therefore, definitely seems to be a strategy worth testing in women with a risk for hereditary breast/ovarian cancer.

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Table 1. Number and percentage of favorable responses about the acceptability of various strategies, arranged in decreasing order*

<table>
<thead>
<tr>
<th>Strategy</th>
<th>No. of subjects/total No. (%) with favorable responses</th>
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<tbody>
<tr>
<td>Mammography</td>
<td>162/167 (97)</td>
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<tr>
<td>Chemoprevention</td>
<td>98/172 (57)</td>
</tr>
<tr>
<td>Prophylactic oophorectomy</td>
<td>38/172 (22)</td>
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<tr>
<td>Mastectomy</td>
<td>18/172 (10)</td>
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<tr>
<td>Women (n = 179)</td>
<td></td>
</tr>
<tr>
<td>Men (n = 29)</td>
<td>22/25 (88)</td>
</tr>
<tr>
<td>Total (n = 208)</td>
<td>4/24 (17)</td>
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</table>

*Not all patients answered every question on the questionnaire. A two-sided chi-squared statistical test was used to compare the differences between strategies.

References


Notes

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