Letters to the Editor


Letter

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Weiderpass et al. (1), on a record linkage cohort study, found an excess risk for in situ and invasive cervical cancer among alcoholic women. Little is known about the potential role of lower levels of alcohol consumption in the etiology of cervical cancer. In the interview study from the Third National Cancer Survey (2), there was no association between alcohol drinking and cervical cancer. A case-control study, based on 257 subjects with cervical cancer from South Africa, showed an excess of risk for alcohol drinkers (3).

We considered the relationship between alcohol consumption and cervical cancer risk using data from a case-control study conducted in Northern Italy between 1981 and 1993 (4, 5). The cases included in the present analysis were 791 women (median age, 53 years; range, 17–79 years) admitted to university and general hospitals with incident histologically confirmed diagnosis of invasive cervical cancer. Control subjects were 916 patients (median age, 54; range, 16–79) admitted to the same network of hospitals for acute conditions (31%, traumas; 30%, nontraumatic orthopedic disorders; 12%, acute surgical conditions; and 27%, other miscellaneous conditions). Alcoholic women were not eligible in this study. Participation rate was over 95% for both cases and controls.

OR and the corresponding 95% CIs were derived from multiple logistic regression models including terms for (a) age and calendar year of interview and (b) additional terms for education, cervical screening history, smoking habits, menopausal status, number of partners, parity, oral contraceptive use, and menopause hormone replacement therapy use.

In comparison with never drinkers, the age-adjusted OR was 1.28 (95% CI, 1.04–1.59) for regular alcohol drinkers, and the multivariate OR was 1.24 (95% CI, 0.98–1.56). The multivariate OR was 1.21 for drinkers of wine only (which represented the large majority of all alcohol intake in Italy) and 1.70 (95% CI, 1.11–2.59) for drinkers of wine and other alcoholic beverages combined.

Table 1 Distribution of 791 invasive cervical cancer cases and 916 controls according to alcohol drinking, and corresponding ORs and 95% CIs in Italy, 1981–1993

<table>
<thead>
<tr>
<th>Total alcohol</th>
<th>Cases/Controls</th>
<th>OR (95% CI)</th>
<th>OR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nondrinkers</td>
<td>282/377</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Drinkers</td>
<td>509/539</td>
<td>1.25 (1.02–1.53)</td>
<td>1.23 (0.99–1.53)</td>
</tr>
<tr>
<td>Occasional</td>
<td>130/156</td>
<td>1.17 (0.88–1.56)</td>
<td>1.21 (0.88–1.65)</td>
</tr>
<tr>
<td>Regular</td>
<td>379/383</td>
<td>1.28 (1.04–1.59)</td>
<td>1.24 (0.98–1.56)</td>
</tr>
<tr>
<td>Wine only</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drinkers</td>
<td>411/455</td>
<td>1.20 (0.97–1.47)</td>
<td>1.21 (0.96–1.51)</td>
</tr>
<tr>
<td>Occasional</td>
<td>80/100</td>
<td>1.15 (0.82–1.61)</td>
<td>1.24 (0.86–1.79)</td>
</tr>
<tr>
<td>Regular</td>
<td>331/355</td>
<td>1.20 (0.97–1.50)</td>
<td>1.19 (0.94–1.51)</td>
</tr>
<tr>
<td>Wine and other</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>alcohol beverages</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drinkers</td>
<td>83/58</td>
<td>1.91 (1.31–2.80)</td>
<td>1.70 (1.11–2.59)</td>
</tr>
<tr>
<td>Occasional</td>
<td>37/36</td>
<td>1.42 (0.87–2.34)</td>
<td>1.40 (0.81–2.42)</td>
</tr>
<tr>
<td>Regular</td>
<td>46/22</td>
<td>2.68 (1.56–4.61)</td>
<td>2.13 (1.17–3.87)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>13.73 (p = 0.0002)</td>
<td>7.01 (p = 0.008)</td>
</tr>
</tbody>
</table>

* Estimated from unconditional multiple logistic regression including terms for age and year of interview.

* Estimated from unconditional multiple logistic regression including terms for age, year of interview, education, cervical screening history, smoking habit, menopausal status, number of partners, parity, oral contraceptive use, and menopause hormone replacement therapy use.

* Reference category.

In a companion study of in situ cervical cancer (6) based on 408 cases and 322 outpatient controls, the multivariate OR for drinkers was 1.15 (95% CI, 0.83–1.59).

Moderate alcohol drinking is socially accepted among Italian women (7), and the information on alcohol consumption was satisfactorily valid and reproducible (8). Cases and controls came from comparable catchment areas and participation was almost complete. The results were similar when comparisons were made with different diagnostic categories of controls. Allowance for a large number of potentially confounding factors, including indicators of sexual habits, did not materially modify any of the risk estimates, but we did not have a direct measure of human papillomavirus infection (9). Given the strong association between sexually transmitted diseases and cervical cancer (6, 9) residual confounding, however, cannot be excluded for such a modest association. Furthermore, we collected information only on the frequency of alcohol consumption, with no quantitative estimate of amount drunk.

These limitations notwithstanding, the present findings provide moderate support for a modest association between alcohol drinking and invasive cervical cancer.

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2 The abbreviations used are: OR, odds ratio; CI, confidence interval.
References

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