No association of anti-Chlamydia trachomatis antibodies and severity of cervical neoplasia
Reesink-Peters, N.; Ossewaarde, J.M.; van der Zee, A.G.J.; Quint, W.G.V.; Burger, M.P.M.; Adriaanse, A.H.

Published in:
Sexually Transmitted Infections

DOI:
10.1136/sti.77.2.101

Citation for published version (APA):
No association of anti-Chlamydia trachomatis antibodies and severity of cervical neoplasia

N Reesink-Peters, J M Ossewaarde, A G J Van Der Zee, W G V Quint, M P M Burger and A H Adriaanse

*Sex. Transm. Inf.* 2001;77;101-102
doi:10.1136/sti.77.2.101

Updated information and services can be found at:
http://sti.bmjjournals.com/cgi/content/full/77/2/101

These include:

**References**
This article cites 10 articles, 4 of which can be accessed free at:
http://sti.bmjjournals.com/cgi/content/full/77/2/101#BIBL

**Rapid responses**
You can respond to this article at:
http://sti.bmjjournals.com/cgi/eletter-submit/77/2/101

**Email alerting service**
Receive free email alerts when new articles cite this article - sign up in the box at the top right corner of the article

**Topic collections**
Articles on similar topics can be found in the following collections

- Cancer: gynecological (248 articles)
- Sexually Transmitted Infections (1265 articles)

**Notes**

To order reprints of this article go to:
http://www.bmjjournals.com/cgi/reprintform

To subscribe to *Sexually Transmitted Infections* go to:
http://www.bmjjournals.com/subscriptions/
No association of anti-Chlamydia trachomatis antibodies and severity of cervical neoplasia


Objective: To explore whether the presence of Chlamydia trachomatis antibodies is associated with the severity of neoplastic lesions in women with cervical dyskaryosis.

Methods: In a cross-sectional study in two groups of women referred for an abnormal Papanicolaou smear (group A: 296, group B: 331 women) blood samples were analysed for antichlamydial antibodies by enzyme immunosassay. Cervical neoplasia was graded histologically.

Results: In group A no association was found between increasing grade of CIN and the presence of antichlamydial antibodies. The proportion (93%) of women with antichlamydial antibodies was higher in 14 women with (micro)invasive carcinoma than in women with CIN (35%). As the high prevalence of antichlamydial antibodies in women with cervical carcinoma is not consistent with prevalences reported in recent literature, we analysed a second group of women in which indeed the high prevalence was not confirmed.

Conclusion: Our results suggest that the presence of circulating antichlamydial antibodies is not associated with the severity of neoplastic lesions and it seems unlikely that C trachomatis has a role in the progression of cervical neoplasia.

(Keywords: cervical neoplasia; Chlamydia trachomatis)
Table 2 Patient characteristics for group A and B

<table>
<thead>
<tr>
<th>Group</th>
<th>Age (median, interquartile range)</th>
<th>Sex (median, interquartile range)</th>
<th>Smoker (% 95% CI)</th>
<th>No dysplasia (% 95% CI)</th>
<th>CIN I (% 95% CI)</th>
<th>CIN II (% 95% CI)</th>
<th>CIN III (% 95% CI)</th>
<th>(M)IC (% 95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A</td>
<td>35-39</td>
<td>4-10</td>
<td>45</td>
<td>29</td>
<td>14</td>
<td>15</td>
<td>12</td>
<td>13</td>
</tr>
<tr>
<td>Group B</td>
<td>35-42</td>
<td>4-10</td>
<td>45</td>
<td>29</td>
<td>14</td>
<td>15</td>
<td>12</td>
<td>13</td>
</tr>
</tbody>
</table>

*χ² test, p<0.001.
χ² test for trend was not significant for both groups.

Table 2 Patient characteristics for group A and B

<table>
<thead>
<tr>
<th>Group A</th>
<th>Group B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>35-42</td>
</tr>
<tr>
<td>Sex</td>
<td>4-10</td>
</tr>
<tr>
<td>Smoker</td>
<td>45</td>
</tr>
<tr>
<td>No dysplasia</td>
<td>29</td>
</tr>
<tr>
<td>CIN I</td>
<td>14</td>
</tr>
<tr>
<td>CIN II</td>
<td>15</td>
</tr>
<tr>
<td>CIN III</td>
<td>12</td>
</tr>
<tr>
<td>(M)IC</td>
<td>10</td>
</tr>
</tbody>
</table>

Discussion

Differences between groups A and B might occur because of systematic differences between the two groups or because of chance. Effort was made to reduce systematic differences: period treated EIA was performed for both groups separately, but the same reference serum was used. Criteria for eligibility for group A and B corresponded. Therefore, we have no other explanation than that the difference in the proportion of women with no dysplasia and CIN II is due to chance. The reported differences appeared to have no implication for our results.

Overall prevalences of antichlamydial antibodies were comparable for groups A and B. However, 93% of the women with (M)IC in group A had antichlamydial antibodies compared with 55% in group B. Prevalences reported by others are comparable with the prevalence found in group B. The number of women with (M)IC in group A is low. The 95% CI of the prevalence is very wide in this group and overlaps the 95% CI of the proportion observed in the same category of group B (table 2). Chance has a great effect on small study populations. Considering what is discussed above we conclude that the high prevalence in the (M)IC group of A is due to chance.

The role of C trachomatis in the aetiology of cervical neoplasia is hard to interpret. Many studies reported antichlamydial antibodies to be more frequent in women with cervical neoplasia than in controls. This might indicate that C trachomatis has a causal role in cervical carcinogenesis. Our results suggest that C trachomatis does not favour the progression from CIN to invasive disease. However, it should be kept in mind that these serological data can not exclude the possible involvement of local factors induced by (chronic) C trachomatis infections.

Contributors: NR was the main author of the article and performed the statistical analysis; JMO performed the EIA and was the author of the C trachomatis methods section; AGJVdZ collected the patient samples of group B whereas MPMB collected the samples for group A and supervised the research programme; WGVQ advised on the methodology of the study and AHW was coauthor of the article and supervisor.