The performance of microscopic cervicitis for the detection of chlamydial infection

The diagnosis of chlamydial cervicitis by microscopy provides an opportunity for early treatment of infected patients and possible reduction in the incidence of pelvic inflammatory disease. Because of utilisation of insensitive methods for diagnosis of Chlamydia trachomatis, the conclusion of previous studies on the definition of chlamydial cervicitis has been inconsistent.1 2

The aim of this study was to define the most sensitive and specific cut-off for polymorphonuclear (PMN) counts associated with chlamydial cervicitis diagnosed by a nucleic acid amplification test.

This was a prospective double blinded study on consecutive women older than 16 years and not menstruating attending the Department of GUM in Edinburgh for screening of sexually transmitted infections (STI) between May and September 2002. Patients were tested for Neisseria gonorrhoeae diagnosed by inoilation of ana-genital materials on modified New York City culture media (MNVC) and for C trachomatis detected by testing endocervical material by ligase chain reaction (LCR). Gram stained and saline mount vaginal smears were utilised for the detection of bacterial vaginosis (BV) and Trichomonas vaginalis (TV) respectively. The diagnosis of BV was based on the modified Amsel’s criteria.

Cervical smears were examined by GB who was blinded to the outcome of the clinical and microbiological tests of patients. The median of PMN counts in five non-adjacent ×1000 microscopy fields in Gram stained endocervical smears was calculated. Slides with more than 100 squamous cells per slide or more than 100 bacteria per ×1000 microscopy fields were deemed contaminated with vaginal flora and were excluded from analysis.

The χ² and Mann-Whitney U tests were conducted for categorical and non-parametric data respectively. A smear was positive only if it related to a positive LCR result.

The sensitivity and specificity of different PMN cut-offs in cervical smears for the detection of chlamydial infection. Limitation of cervical microscopy to women of 24 years or younger, those with BV, or women on oral contraceptive pill was not associated with better sensitivity or specificity of cervical smears (data not shown).

In our study, the prevalence of chlamydial infection among studied women was similar to that of reported elsewhere in United Kingdom.3 The sensitivity of cut-off of ≥5 PMN cells ×1000 microscopy field was higher than that reported by studies using enzyme immunoassay for diagnosis of C trachomatis. This could be due to the superior performance of LCR in diagnosis of chlamydial infection.4 Increasing the cut-off of chlamydial cervicitis improved the specificity at the expense of reduction in the sensitivity.

Table 1 The sensitivity and specificity of different PMN cut-offs in cervical smears for detection of chlamydial infection (total 138, prevalence of chlamydia 12.31%)

<table>
<thead>
<tr>
<th>PMN cut-off criteria</th>
<th>No of cervical smears</th>
<th>Positive chlamydia test</th>
<th>Sensitivity (%)</th>
<th>Specificity (%)</th>
<th>PPV (%)</th>
<th>NPV (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>≥5 PMN/1000 hpf</td>
<td>85</td>
<td>13</td>
<td>76</td>
<td>40</td>
<td>15</td>
<td>92</td>
</tr>
<tr>
<td>≥10 PMN/1000 hpf</td>
<td>56</td>
<td>10</td>
<td>59</td>
<td>62</td>
<td>18</td>
<td>91</td>
</tr>
<tr>
<td>≥15 PMN/1000 hpf</td>
<td>48</td>
<td>10</td>
<td>59</td>
<td>69</td>
<td>21</td>
<td>92</td>
</tr>
<tr>
<td>≥20 PMN/1000 hpf</td>
<td>39</td>
<td>9</td>
<td>53</td>
<td>75</td>
<td>23</td>
<td>92</td>
</tr>
<tr>
<td>≥25 PMN/1000 hpf</td>
<td>31</td>
<td>9</td>
<td>53</td>
<td>82</td>
<td>29</td>
<td>92</td>
</tr>
</tbody>
</table>

*High power field: ×1000 microscopy. †Positive predictive value. ‡Negative predictive value.

Although some studies have suggested an association between chlamydial cervicitis and presence of BV,5 6 our study did not show such a relation.

In conclusion, chlamydial cervicitis may be used for early treatment of patients who may not follow up their results in the settings with high prevalence of infection. In this respect a cut-off of ≥5 PMN appears to have a reasonable sensitivity.

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Chlamydia trachomatis heat shock protein 60 (hHSP60) antibodies in women without and with tubal pathology using a new commercially available assay

Besides commercially available serological assays that detect antibodies to major outer membrane protein (MOMP) and lipopolysaccharide (LPS) “in-house” chlamydial heat shock protein 60 (hHSP60) assays are extensively used in assessing serological responses to urogenital Chlamydia trachomatis infection. Although high comparison of the different “in-house” assays is difficult owing to a lack of standardisation, there is a consensus among the users of these assays that the anti-hHSP60 responses in women increase with the severity of C trachomatis associated disease, leading to the suggestion that the high amino acid sequence homology between
Chlamydia trachomatis IgG and CHSP60 antibody responses in Dutch white women with different degrees of tubal pathology.

Figure 1  Chlamydia trachomatis IgG and CHSP60 antibody responses in Dutch white women with different degrees of tubal pathology.

The prevalence of excessive alcohol consumption and the acceptability of brief advice in a sexual health clinic: cross sectional survey

Excessive alcohol consumption has been implicated in unsafe sex and the spread of sexually transmitted infections. Cross sectional surveys in sexual health clinics have shown that most patients drink alcohol regularly, but the proportion misusing alcohol has not been reported. Brief interventions for alcohol misuse have been shown to be beneficial across a range of medical settings, but their use in sexual health clinics has not been explored. We therefore examined the acceptability of offering brief advice to people identified as misusing alcohol in a sexual health clinic.

Two doctors (PCL, CB) set out to recruit consecutive attendees at walk-in clinics at the Jeffreys Wing Centre for Sexual Health at St Mary’s Hospital in London over a 3 month period. Consenting patients were interviewed using the Paddington Alcohol Test (PAT). Those drinking excessively were offered a self help leaflet, “Think about Drink,” and/or an appointment with an alcohol health worker (AHW). Acceptance of brief intervention was noted, and AHW records examined to find