Follow up of women with borderline cervical smears as defined by national guidelines

Mark K Heatley

Abstract

Aim—To determine the proportion of women with abnormalities in cervical smears corresponding to borderline nuclear change, as defined by national guidelines, which return to normal or persist as cytological or histological abnormalities.

Methods—313 women with borderline nuclear change diagnosed by a single pathologist using the national criteria were followed up for up to two years.

Results—On initial follow up, 45% of women had a negative smear or biopsy, 46.5% had a low grade cytological or histological abnormality, and 8.5% had a high grade abnormality. Of 81 patients in whom a second follow up smear or biopsy was available, 47% had no detectable abnormality, 38.5% had low grade lesion, and 14.5% had a high grade lesion. In total, 32 patients (10.2%) had a high grade lesion (defined as moderate or severe dyskaryosis on smear or CINII or CINIII on biopsy) on at least one follow up sample.

Conclusions—The results support the use of the national criteria defining borderline nuclear change in identifying women at increased risk of developing a high grade cervical intraepithelial neoplasia, as identified histologically or cytologically, and highlight the importance of follow up in these patients.

Keywords: cervix; cervical intraepithelial neoplasia; cytology

Discussion

There is a greater chance that women with borderline smears will be found subsequently to have high grade cervical abnormalities than
those with reactive changes. This study indicates that 10.2% of women developed a high grade dyskaryosis or CIN lesion within two years of having a borderline smear. Hirschowitz et al found that 22.4% of women with borderline cytological changes had a smear test showing high grade dyskaryosis, which developed between 13 and 106 months after the index smear. Fifty per cent of these women, or 11.2% of their total study group, developed their high grade lesion within 34 months. The frequency with which a high grade lesion was identified after a borderline smear was therefore similar in the two studies. This study, however, is the first to use the national guidelines to define the borderline lesion and of these only one had a subsequent negative biopsy, the remainder showing low grade abnormality (16 cases) or high grade abnormality (three cases). This highlights the importance of continued follow up in women with a persistent borderline abnormality. Nine women had mild dyskaryosis or CINI on smear or biopsy as an initial investigation on first review (table 2). One of these patients had a subsequent negative smear and the remaining eight women showed no evidence of progression or regression, highlighting the relative stability of this lesion. 10–12

This follow up study confirms the previous suggestion that borderline smears are associated with the subsequent diagnosis of high grade cervical lesions in about one tenth of women in the short term, possibly because in some cases they were underrepresented on the index smear. It provides evidence to support the validity of the borderline document and justifies the careful follow up of women with borderline smears which has been recommended nationally. 9

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3 Slater DN. Borderline smears: have the guidelines lessened the confusion or increased it? Cytopathology 1996;7:73–4.
9 Herbert A. Achievable standards, benchmarks for reporting, criteria for evaluation of cervical cytopathology. Cytopathology 1995;6(suppl 2).

Table 1 Results of follow up in 313 women diagnosed with borderline smears using national criteria. All of the women had a biopsy or repeat smear (first review) and in 81 the results of a further second (repeat) biopsy or smear were available (second review)

<table>
<thead>
<tr>
<th></th>
<th>Results of cytological follow up</th>
<th>Dysskaryosis</th>
<th>Results of histological follow up</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Negative</td>
<td>BNC</td>
<td>Mild</td>
</tr>
<tr>
<td>First review</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Second review</td>
<td></td>
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<td></td>
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</tbody>
</table>

BNC, borderline nuclear change; CIN, cervical intraepithelial neoplasia.

Table 2 Comparison of findings on second review with the results of the first review in 81 women in whom both were available following an initial borderline smear

<table>
<thead>
<tr>
<th></th>
<th>Follow up with cytology (Dyskaryosis)</th>
<th>Follow up with histology</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>First review</td>
<td>Second review</td>
</tr>
<tr>
<td>Cytology</td>
<td>Negative</td>
<td>BNC</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dyskaryosis</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Mild</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Moderate Histology</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>CINI</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>31</td>
<td>5</td>
</tr>
</tbody>
</table>

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