Compliance with follow up cytology after discharge from the colposcopy clinic.

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_Citation_
Compliance with Follow up Cytology after Discharge from the Colposcopy Clinic

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Compliance with follow up cytology after discharge from the colposcopy clinic and to identify predictive factors for poor compliance. This is a retrospective cohort study of patients initially managed in our institution in 2001. Patients were evaluated for adherence with the recommendations received at the time of discharge from the clinic. Of the 16 women that were initially contacted, 10 agreed to participate in the study (62.5% response rate). They were considered as compliant. While older patients (>40 years) were significantly less likely to show complete compliance (OR: 0.12; 95% CI: 0.02-0.58; p=0.009).

Introduction

The incidence of cervical cancer has been dramatically reduced in the UK since the introduction of cervical screening programme. Nonetheless, 493,000 new cases and 273,000 deaths still occur annually worldwide. Effective methods of treatment commonly used for CINs (cervical intraepithelial neoplasia) are LLETZ (large loop excision of the transformation zone), cold knife cone (CKC), laser coagulation and other destructive techniques such as laser vaporization and cold coagulation. Despite the evidence of CIN, all represent simple and quick procedures, most frequently performed under local anaesthesia. To date, no difference in efficacy among the available conservative methods of treatment has been demonstrated though the evidence is not conclusive. Despite appropriate treatment, women with pre-malignant cervical disease are at increased risk of residual or recurrent disease.

Methods

Data from 660 patients who attended the colposcopy service at the CWH (Coombe Women's Hospital) during 2001 was reviewed. A total of 326 "new" patients (first-ever attendees in a colposcopy clinic) with proven CINs in 2001 who were then discharged before 2007 were initially eligible. At the time universal practice following a LLETZ treatment was that a patient should have two normal smears to return to yearly cytology follow-up for 10 years; the smears could be either obtained at the GP or at CWH smear clinic. If only biopsies were obtained, then two or three consecutive smears at CWH in six month intervals were essential for returning to community cytology screening; if an abnormal smear was obtained, the patient returned to the colposcopy clinic. Patients who had a subsequent hysterectomy were excluded from the study (n=8). Patients' data such as the grade of the initial referral smear, final colposcopic diagnosis, number of visits and duration of follow up, details of possible intervention and the histology diagnosis were documented. In addition, the participants' age, smoking status and parity were systematically recorded. Of the 318 eligible patients 116 patients were successfully contacted by telephone and asked to participate in the study. 212 patients were lost to follow up (moved from their previous address or changed telephone number), no statistical differences observed regarding age, parity, smoking, referral smear, diagnosis and procedure performed (LLETZ or biopsy) or grade of CIN between patients who could not be contacted and others. A Research Assistant conducted the telephone survey using a series of identical questions to all patients. Participating patients were asked about the number, dates and results of cervical smears since they were discharged from the colposcopy clinic. Subsequently the cytology was confirmed by checking their medical record & GP letters. Women who had regular cervical smears as recommended were considered as compliant (complete compliance). Women who had no smears were considered as non compliant.

Several tools for post-CIN treatment surveillance are available such as cytology, colposcopy, and more recently HPV testing. Despite robust evidence that HPV testing represents the best stand-alone test of cure, several tools for post-CIN treatment surveillance are available such as cytology, colposcopy, and more recently HPV testing. However, such a follow up policy is crucially dependent on patient compliance. The objective of this study was to evaluate the compliance rate of women discharged from the colposcopy clinic with follow up cytology advice and to identify predictive indices of poor compliance.
Results

Of the 116 patients contacted by telephone, 100 women were interviewed and answered the questionnaire (86.2% response rate); among these 45 presented with mild dyskaryosis (CIN1) and 55 with severe dyskaryosis (CIN2-3). Patients’ characteristics are summarised in Table 1. Cervical biopsies had been performed in 34 cases. A total of 63 women underwent a LLETZ procedure. Spontaneous regression of CIN1 to normal was observed in 34 (75.6%) women. LLETZ was performed in the remaining 11 (24.4%) who had persistent CIN1 after a median follow up of 15.8 months (range 3.8 - 45.8 months). Fifty-two patients with CIN2-3 (94.5%) had LLETZ. Two women with cytology and a colposcopic impression of CIN2 spontaneously regressed to normal after 17.1 and 26.5 months of follow up respectively. One woman with a smear and biopsy of CIN 2 regressed spontaneously after 10.6 months.

Among the respondents, 60 women had regular cervical smears as recommended and were considered entirely compliant. One of these was referred back to the colposcopy clinic after receiving two consecutive CIN3 smears; she was subsequently treated. Two women had CIN1 in their recent smear tests. One with a persistently abnormal smear was referred by her GP to another colposcopy clinic. A total of 4 women out of 60 were diagnosed with residual or recurrent CIN.

Figure 1: Odds ratios for age as an effect on patient compliance with cytological follow up advice after the management of CIN (n=100).
References


5. Greenspan et al. reported that patients living in urban areas as well as those treated in private clinics were considerably more likely to achieve incomplete follow up or to be lost for follow up.

6. The findings of this study have several possible implications. As far as we are aware, this is the first study to report an association between age and compliance. It was not surprising to us that younger patients appeared to be relatively more compliant as younger individuals have better access to internet resources and are usually concerned about fertility issues. But, as our advice at the time was largely verbal, this might be also explained by differences in physicians' attitudes, and their approach while counselling younger women.

7. The introduction of leaflets in CWH's colposcopy clinics with concise information written in lay terms in the mid-2000's partially addressed this issue. Older women's relative inability to clear HPV infection as age advances, as well as fundamental changes in the transformation zone that parallel estrogen decline, multiply cancer risk in this very group that is more likely to default.

8. There is an urge to improve the awareness of patients regarding their risk of recurrence and the need for follow up compliance. A number of strategies for ensuring better compliance could be considered, for example reminder letters, telephone calls or short message service (SMS). The use of information in leaflets has been conclusively shown to improve women's knowledge of abnormal smears and colposcopy services. The National screening programme is currently in place with the aim to remind women of their most recent smear due date instead helps contextualise the findings. Finally, our study is limited by standard biases inherent to retrospective analysis and by the limitation of our small study sample. Moreover, since our study took place in a single clinical setting it is possible that it is reflective of our population directly influenced our results. Minor variations in the management of patients and the information provided to the patients among different physicians in the colposcopy clinic should have minor impact as all adhered to the current ESCCP guidelines of the time.

9. The use of high risk or oncogenic HPV testing as part of post-CIN treatment follow up has been commonly shown to be the most effective strategy for the recognition of post treatment residual CIN. In the context of post treatment surveillance, a positive HPV test is associated with an increased risk of residual disease. In its ability to rule out residual and/or recurrent disease, HPV testing is also more accurate than follow up cytology, colposcopy or the histological recognition of resection margin positivity at the time of excision. With close to 100% negative predictive value, a negative HPV test (like hybrid capture 2 - HC2) virtually eliminates the risk of recurrent disease after treatment for CIN. This is important to note because the test of cure is well established and should be universally implemented in clinical practice. Recent results from Kitchener et al. suggest that a single negative HPV testing eliminates the risk of recurrence over a 5-year period. This has obvious implications for cost effective post treatment protocols. Compliance with advice given at the time of discharge to patients treated for CIN is unpredictable and might be limited. Specific attention should be paid to older patients. Physicians should provide women with appropriate comprehensive verbal as well as written information on the necessity for follow up. Proposed strategies for improving compliance should be further investigated. The realization of poor compliance to cytology surveillance adds strength to the argument in favour of oncogenic HPV testing as the definitive test of cure.

Acknowledgements

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Table 2: Effect of different variables on compliance with cervical follow up advice (n=100).

<table>
<thead>
<tr>
<th>Variable</th>
<th>OR</th>
<th>95% CI</th>
<th>p</th>
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</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; 30 years</td>
<td>0.92</td>
<td>0.87-0.97</td>
<td>0.004</td>
</tr>
<tr>
<td>&gt; 40 years</td>
<td>0.27</td>
<td>0.19-0.36</td>
<td>0.003</td>
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<tr>
<td>Parity</td>
<td>0.12</td>
<td>0.02-0.58</td>
<td>0.009</td>
</tr>
<tr>
<td>Cervical smear</td>
<td>0.34</td>
<td>0.24-0.49</td>
<td>0.002</td>
</tr>
<tr>
<td>Patient had a cervical biopsy</td>
<td>0.09</td>
<td>0.03-0.23</td>
<td>0.8</td>
</tr>
<tr>
<td>Patient had a LLETZ</td>
<td>0.81</td>
<td>0.55-1.24</td>
<td>0.61</td>
</tr>
<tr>
<td>Number of visits to the colposcopy clinic</td>
<td>1.19</td>
<td>0.87-1.64</td>
<td>0.28</td>
</tr>
<tr>
<td>Duration of follow up</td>
<td>1</td>
<td>0.69-1.01</td>
<td>0.689</td>
</tr>
<tr>
<td>DNA**</td>
<td>1.05</td>
<td>0.44-2.54</td>
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<tr>
<td>Final diagnosis</td>
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<td>0.46-2.24</td>
<td>1</td>
</tr>
</tbody>
</table>

Data are expressed as numbers with percentages in brackets (%) unless otherwise indicated.

* Suspicious looking cervix or post-coital bleeding
** Duration of the clinical and colposcopic management in our institution before discharge
*** Did not attend to at least one of their appointment during the time they were followed-up in our institution
† Anova test
‡ Chi square test
§ Fisher's exact test


Author's Correspondence
No Author Comments
Acknowledgment
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Other References
No Other References