

A review of referrals of postmenopausal women to a colposcopy clinic

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Abstract

Aims

Although evidence supports offering cervical screening in postmenopausal women, the impact of low oestrogen levels on the cervical and vulvovaginal epithelium can present challenges for cervical screening and colposcopy. The aim of this audit was to evaluate the reason for referral and colposcopic and histological findings for postmenopausal women.

Methods

A retrospective cohort study of 275 consecutive postmenopausal women who had their first visit to a colposcopy clinic between 2020 and 2023. Eight cases were excluded from analysis due to missing data.

Results

Of the 275 referrals, 44 were referred for screening due to difficulties taking a sample in primary care and did not require colposcopy, the remaining 231 colposcopy referrals were analysed. Reasons for referral included HPV positivity with normal cytology (n=77, 33%), HPV positive low-grade cytology (n=83, 36%), HPV positive high-grade cytology (n=14, 6%) and a finding of "Suspicious cervix" at time of screening (n=46, 20%).

A satisfactory colposcopic examination was performed in 86% (199/231). Cervical biopsies were performed in 53% (123/231). Histological findings included low-grade CIN (n=21, 17%), high-grade CIN (n=16, 13%) and no CIN (n=81, 66%). A diagnosis of cervical cancer or high-grade disease was found in 8.6% (20/231) of this cohort.

Discussion

Whereas screening in the postmenopausal population can be challenging, this study shows evidence of significant pathology in this cohort.

Introduction

Cervical cancer is a preventable disease. In 2020 the WHO launched a global initiative to eliminate cervical cancer by 2030 through HPV vaccination, high performance cervical screening and treatment of precancerous abnormalities¹. Evidence supports continuing cervical screening after menopause with most cervical screening programmes offering screening until at least the age of 65 years^{2,3}. Moreover, with the introduction and success of the HPV vaccination uptake in younger women, women over 50 years who are less likely to be vaccinated are at higher risk of cervical cancer than younger vaccinated population. Women who develop cervical cancer in later life are more likely to have exited cervical screening prior to the recommended age⁴. Furthermore, a false perception exists among women that cervical screening is no longer required after the menopause and attendance rates can decline in this age group^{5,6}. In Ireland, screening uptake is high up to the age of 54. Overall population coverage is 73%, the third highest in the OECD, but declines significantly over the age of 55^{6,7}.

Despite the evidence that supports the recommendation to continue screening after menopause, this can present issues. The effect of a hypoestrogenic state on the cervical epithelium leads to atrophy which can mimic low grade cytological changes. A type 3 transformation zone where the full transformation zone is not visible, is also more prevalent in the post-menopausal population leading to difficulty accurately assessing the cervix in those referred to colposcopy. Additionally, low oestrogen can cause vaginal dryness, atrophy and irritation which can make having a cervical screening test taken uncomfortable for participants. The use of vaginal oestrogen prior to colposcopy has been the subject of recent studies aimed at improving outcomes for postmenopausal women attending colposcopy^{8,9}.

In Ireland, cervical screening is offered up to the age of 65 since the introduction of HPV screening in 2020. We aim to evaluate the impact of screening and colposcopy in postmenopausal women.

Methods

A retrospective cohort study on 275 consecutive postmenopausal women referred to University Hospital Kerry (UHK) colposcopy service was performed. Women who had a first visit to the colposcopy clinic between 2020 and 2023 were included in the study. This service receives approximately 650 new referrals per year. Local approval of the study was provided by the clinical governance committee, and it was registered on the UHK quality and patient safety audit database. In line with the HSE guidance on clinical audit, ethical approval was not required but data protection principles were adhered to¹⁰. Postmenopausal women were selected by documented menopause status on the colposcopy IT system (Compuscope).

Datasheets of the selected women were evaluated via the electronic healthcare records (MN-CMS Cerner). Additionally, histology and cytology reports were reviewed. Collected data was inputted into a pseudo-anonymised data collection tool which was stored on a password protected desktop at UHK. Only the named authors of the study had access to the data collection tool. The data collected included reasons for referral, transformation zone type, colposcopic opinion, histology, treatments and outcomes. Additionally, background demographic data was collected including age, history of previous treatments, smoking status and HRT/vaginal oestrogen usage.

Results

There were 283 referrals of postmenopausal women to Kerry colposcopy service between 2020 and 2023. Eight were excluded due to missing information in the electronic chart or incorrectly documented menopause status. There were 44 referrals requesting screening due to difficulties obtaining a sample in the community and 231 referrals for colposcopy.

Of the 44 referrals for screening, 40 had a cervical screening sample taken in colposcopy and were found to be negative for HPV. They were either discharged to routine screening or discharged from the screening programme. Two of the 44 were found to have cervical polyps at the time of screening and underwent polypectomies – both of which were benign. One of the women who underwent polypectomy was found to be HPV positive with HSIL on her cervical screening test and subsequently underwent a LLETZ procedure. The histology showed CIN1 and her test of cure at six months was negative for HPV. One of the 44 referred for screening had a cervical punch biopsy which was benign. The remaining woman de-consented from cervical screening due to difficulty tolerating the procedure.

There were 231 referrals for colposcopy (see figure 1). The most common reason for referral was HPV positivity with low grade cytology (n= 83, 36%). HPV positive high grade cytology referrals accounted for 6% (n=14). Other reasons included HPV positivity on two consecutive samples with normal cytology (n=77, 33%) and a suspicious cervix at the time of screening/examination (n=46, 20%), three consecutive inadequate samples (n=1) and other (n=6). “Other” reasons for referral included a referral for vulvoscopy, HPV positivity with unsatisfactory cytology, a request for colposcopy for a woman with a newly diagnosed HPV related anal squamous cell carcinoma and a re-referral of a woman who had previously failed to attend follow up after a treatment.

86% (199) of women referred had a satisfactory colposcopy.

Of the colposcopy referrals the colposcopic opinions were as follows:

- Normal – 170 (73.6%)
- Low Grade CIN – 17 (7.4%)

- High Grade CIN – 5 (2.2%)
- Cancer – 5 (2.2%)
- Unsatisfactory – 32 (13.8%)
- VIN – 1
- Other – 1 (referred HPV positive on 2 consecutive cervical screenings. History of total hysterectomy so no cervix present)

Biopsies were sent for histological examination after colposcopic assessment in 123 patients (53%) of which 81 were benign (66% of total biopsies). Low grade CIN was diagnosed in 21 (17%) and high-grade CIN in 16 (13%) of the biopsies. Five cancers were diagnosed: two squamous cell carcinoma, two adenocarcinoma and one high grade undifferentiated neoplasm with epithelioid and spindle cell morphology.

The positive predictive value of high-grade cytology in the postmenopausal population was 57% (8/14). The positive predictive value of a high-grade colposcopic opinion was 40% (2/5). The positive predictive value of acetowhite seen at colposcopy for any grade of CIN was 73% (16/22). The negative predictive value of a normal colposcopy was 89% (152/170 true negatives/true + false negatives or 18 false negatives).

The average number of attendances per patient was 1.6. Ongoing follow up was continuing at the time of data collection in 22 women. Those with an unsatisfactory colposcopy (n=32) required the most follow up (average number of appointments = 2.28). Of those with an unsatisfactory colposcopy 13/32 (40.6%) had biopsies taken at their first appointment – 10 punch biopsies and 3 wedge biopsies of which 77% were benign (n=10) and 23% (n=3) showed low grade CIN.

Overall, a diagnosis of cervical cancer or high-grade disease was found in 8.6% of postmenopausal women referred for colposcopy (20/231).

Reason for referral to colposcopy	N (total referrals n=231)	Percentage of total referrals
HPV positive, low grade cytology	83	36%
HPV positive on two consecutive tests. Normal cytology	77	33%
Suspicious cervix at the time of screening/examination	46	20%
HPV positive, high grade	14	6%

cytology		
Other	6	2.6%
Symptoms	4	1.7%
Three consecutive inadequate samples	1	0.4%

Figure 1: table representation of reasons for referral to colposcopy

Discussion

This study describes the reasons for referral, colposcopic and histological findings in a relatively large sample of a postmenopausal population referred to a colposcopy clinic. When postmenopausal women encounter issues with cervical screening in the community, a referral to a colposcopy clinic led to a sufficient sample being obtained in 98%. Only one patient in this study was unable to tolerate a cervical screening test. This demonstrates that a colposcopy clinic can serve as a solution for those postmenopausal women who find getting a cervical screening test particularly difficult.

Despite the known challenges of colposcopic assessment in the postmenopausal population, satisfactory colposcopic evaluation was possible for 86% of women in this study. The rate of satisfactory colposcopy rate is higher than had been previously reported in the literature, where one study reports an unsatisfactory colposcopy rate of up to 67%⁹. At the time of publication, there was no evidence of high-grade disease in those women with an unsatisfactory colposcopy who underwent biopsy, but many women remained under surveillance. HPV positivity with low grade cytology was the most common reason for referral to colposcopy. The majority (70/83, 84%) of low-grade referrals had a satisfactory colposcopy examination and the rate of CIN2+ was 7% in this group (6/83) of which 5 women had high grade CIN and one was found to have invasive squamous cell carcinoma at a subsequent LLETZ.

While the negative predictive value of a normal colposcopic examination in this study was relatively high (89%), false negatives do still exist, thus correlation with the referral cytology is of utmost importance. Where discrepancies between referral cytology, colposcopic opinion and histological diagnosis exist, multidisciplinary discussion is valuable to ensure the best course of action for these women¹¹.

As expected, HPV positive women with unsatisfactory colposcopic examinations required the most amount of follow up although no cases of cancer or high-grade disease were identified in this group. However, the numbers in this study are small. Larger studies are needed on the

management and findings in postmenopausal women with unsatisfactory colposcopic examination.

The overall rate of CIN2+ is 8.6%. This is a significant finding and reflects the importance of attendance for cervical screening for postmenopausal women. Of the 20 cases of CIN2+ high grade CIN or cancer, 18 were clinically obvious and were diagnosed at the first visit to colposcopy (90%). Early detection and treatment of precancer changes prevents cervical cancer development for the majority of women. Cervical cancers detected after screening are usually diagnosed at an early stage with 80% being diagnosed at stage 1.

Cervical screening in the postmenopausal women is important, and women should be encouraged to attend up to the recommended date of exit for the screening programme. While a perception exists that evaluation of the postmenopausal cervix is difficult, the majority of women in this study had a satisfactory colposcopy.

Declarations of Conflicts of Interest:

None declared.

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