



C-Gyn 8

Pap smears after hysterectomy

Modern gynaecological practice is to perform a total hysterectomy with removal of the cervix whenever feasible. For women who have had a total hysterectomy, the aim of taking Papanicolaou (Pap) smears from the vaginal vault is screening for the prevention of vaginal cancer. In 2003 there were 67 cases of vaginal cancer diagnosed (Australian Institute of Health and Welfare data), compared with 725 new cases of invasive cervical cancer in Australia.

Hysterectomy for benign reason

Women who have undergone hysterectomy for benign disease (such as menstrual problems or prolapse), have a history of normal Pap smears, and whose histopathology of the cervix shows no neoplastic or premalignant change are at minimal risk for the development of vaginal cancer. It is therefore recommended that these women need not, in the absence of symptoms, have any further Pap smears (NHMRC, 2005).

Indications for continued evaluation

Despite the rarity of vaginal cancer, some women are at a higher risk for the development of vaginal cancer and should continue to have Pap smears taken from the vaginal vault after hysterectomy.

1. Sub-total hysterectomy

Women who have undergone sub-total hysterectomy in the past, that is the cervix has not been removed, should continue to have smears at the recommended interval as a screening for the prevention of cervical cancer.

2. Women for whom the Papanicolaou smear history and/or the histology from the hysterectomy is not known

A significant proportion of women are unaware of their Pap smear results prior to hysterectomy and/or the exact results of any pathology. For many this information has not been readily available, although the introduction of state and territory based cervical cytology registries should assist in accessing this information. If the information is not available it would be prudent to obtain a base-line Pap smear from the vaginal vault at the time of consultation. If this is normal then the woman is probably at a very small risk for the development of vaginal cancer and further smears are only required as clinically indicated.

3. Women with a past history of Pre-invasive disease of the cervix

The majority of women diagnosed as having vaginal intraepithelial neoplasia (VAIN) or vaginal cancer have had previous abnormal smears or cervical intraepithelial neoplasia (CIN2-3) at hysterectomy. The risk of development of VAIN, adenocarcinoma in situ (ACIS) or vaginal cancer is mainly determined by the adequacy of excision of the CIN or ACIS at the time of hysterectomy.

- (i) If the excision margin was involved or not adequately assessed histologically, the woman may be at considerable risk for VAIN or invasive cancer in the region of the vault, which may take years to become manifest. Follow-up should be at the discretion of the

gynaecologist. Vault smears should in general be taken annually. There is no evidence to support a change in this policy.

- (ii) When a high grade lesion (CIN2-3/ACIS) has been completely excised at hysterectomy, there may also be an increased risk of VAIN, recurrent VAIN or invasive cancer because of field change of the lower genital tract. The exact risk of this is difficult to quantify but it seems reasonable that these women should continue to have Pap smears taken from the vaginal vault annually for five years and thereafter revert to the recommended screening interval, as for those with a residual cervix. The role of high risk HPV DNA testing in this situation is uncertain and requires further investigation (ref Daling).
- (iii) Women who have previously had a Pap smear or cervical biopsy with LSIL, (Low grade squamous intraepithelial lesion) and who had reverted to normal cervical cytology prior to hysterectomy do not need vaginal vault smears, unless they are symptomatic. This is in accordance with management of women with LSIL as described in the NHMRC guidelines (ref).
- (iv) Women with a past history of high grade squamous intraepithelial lesions of the cervix (CIN2-3), who have been treated and have subsequent normal Pap smears and are negative for high risk HPV DNA ('test of cure'). These women would have returned 2 yearly cervical screening or in New Zealand 3 yearly. These women may subsequently have a hysterectomy for other reasons with no evidence of residual disease in the histology of the cervix. It seems likely that these women are at no greater risk than women who have not had previous HSIL, and that no further smears are indicated. However, this presumes that women who have cleared HPV from the cervix will also have cleared it from the vagina. There is no evidence to support this presumption and therefore it would seem prudent that women continue to have vaginal vault smears every two years, until further evidence suggests a more conservative approach. This advice will be strengthened by the monitoring reports related to the new guidelines (ref Appendix 13).

4. Women previously treated for invasive gynaecological malignancy

Some of these women are at risk for recurrent disease in the region of the vaginal vault. Women treated for carcinoma of the cervix and endometrium have traditionally had vaginal vault smears as part of routine surveillance. Most authorities note limited value of Pap smears in this situation in asymptomatic women particularly in endometrial cancer patients. Most gynaecological treatment centres are not performing Pap smears for endometrial cancer surveillance, but many continue to do annual smears for cervix cancer patients. Pap smears for this group should be at the discretion of the treating gynaecological oncologist. Once these patients are discharged from subspecialist care it would be usual to perform annual vault smears indefinitely.

Women previously treated for vaginal intraepithelial neoplasia (VAIN)

These women are at risk for development of VAIN in other parts of the vagina as this disease may be multifocal. They should continue to have Pap smears every 1-2 years or at the discretion of their treating specialist.

5. Women who are severely immunosuppressed as the result of disease or therapy

Immune impairment is a predisposing factor for squamous cell malignancy of the lower genital tract. Data in this group of women who have had a hysterectomy for benign disease is limited. It would seem prudent that these women have vault smears every 2 years or in New Zealand 3 yearly.

6. Women who were exposed to DES (diethylstilboestrol) in utero

These women are at increased risk for clear cell cancer of the vagina and cervix. The lifetime risk is very small (1:1000-10000) but in the absence of evidence to the contrary they should continue to have Pap smears from the vaginal vault and careful palpation of the vaginal walls at 1-2 yearly intervals after hysterectomy.

References

Australian Institute of Health and Welfare

Number of new cases and age standardised rates (Australia 2001 and World) for selected cancers by year of registration

<http://www.aihw.gov.au/cognos/cgi-bin/ppdscgi.exe?DC=Q&E=/Cancer/canceronageratesv2007> (accessed 8 September 2007)

Solomon D, Breen N, McNeel T. Cervical cancer screening rates in the United States and the potential impact of implementation of screening guidelines *CA Cancer J Clin.* 2007;57:105-111

Daling JR, Madeleine MM, Schwartz SM, Shera KA et al. (2002) A population based study of squamous cell vaginal cancer:HPV and cofactors. *Gynaecologic Oncology* 84(2):263-270

NHMRC Screening to Prevent Cervical Cancer: Guidelines for the Management of Asymptomatic Women with Screen Detected Abnormalities. 2005. Appendix 13, p 169. *NHMRC*, Canberra.

<http://www.nhmrc.gov.au/publications/synopses/files/wh39.pdf> (accessed 29 October 2007)

Links to other related College Statements

[C-Gyn 5 Screening for the prevention of cervical cancer](#)

[C-Gyn 6 Guidelines for referral of investigation of intermenstrual and postcoital bleeding](#)

[C-Gyn 19 RANZCOG/RACGP Joint Statement on Pap Smears](#)

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