Screening for Endometrial Cancer

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Abstract

Carcinoma of the endometrium is the most common carcinoma of the female genital tract. Papanicolaou smears are less successful in detecting endometrial than cervical cancers. The yield can be increased by concentrating on high risk patients and in doing, in selected or suspicious cases, endometrial biopsy and/or dilatation and curettage.

Key words: *Endometrial cancer, Papanicolaou smear, endometrial biopsy, dilatation and curettage.*

Adenocarcinoma of the endometrium is becoming the most common carcinoma of the female genitalia.[1] However, unlike carcinoma of the cervix, a Papanicolaou (Pap) smear is less successful in detecting most endometrial cancers because:[1]

1. The endometrial cavity is not easily accessible.
2. The disease is age related, i.e., most of the cases occur in postmenopausal women and cervical stenosis is common in this group of patients.
3. The lesions are of highly differentiated cell type which undergo rapid lysis.

However, endometrial carcinoma has high risk indicators which can help in identifying the group of patients to screen (Table 1).

To screen for endometrial carcinoma, samples can be recovered directly from the endometrial cavity or from the endocervical canal, external os, and posterior vaginal fornix.

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Cytologic screening

The most widely used screening is the cervicovaginal smear which has an accuracy of less than 40%.[2] Diagnostic accuracy of cytologic sampling may be increased to about 70% by aspirating the endocervical canal.[3] In addition, the yield can be increased by remembering that the presence of endometrial cells in the Pap smear in any postmenopausal patient, and during the secretory phase in women in the reproductive years, is abnormal and ought to be investigated.

In recent years several methods for cytologic evaluation, including Jet washing and brush techniques, have been used with improved detection rates ranging from 60-100%.[4,5] However, the disadvantage of these methods is the difficulty in interpretation due to mucus and blood contamination. The diagnostic accuracy of these methods is displayed in Table 2.

Histologic diagnosis

Several office procedures have been developed to obtain endometrial tissue. Most suction curettes use aspirators and have a metal or plastic cannula connected to a plastic chamber to collect the tissue. The suction is generated by vacuum pressure of 60-100 ml of water.

The two main types that are used are the Vabra, which has a separate suction unit, and the Vakutage, which has a self-contained pre-evacuated system. Diagnostic accuracy for both is 95%.[6,7]

Endometrial aspiration biopsy using Novak or

Table 1. Endometrial carcinoma risk indicators

	Relative Risk
Obesity	3-10
Age >52 years	3
Late menopause >55 years	2.4
Nulliparity	2-5
Estrogen replacement therapy	3-8
Pelvic irradiation for benign conditions	7
Breast carcinoma	1.2
Adenomatous hyperplasia	-*
Polycystic ovary (Stein-Leventhal Syndrome)	-*
Steroid secreting tumors	-*
Chronic liver disease.	-*
Anovulatory (Dysfunctional uterine bleeding)	-*

*Increased relative risk, but definite figures unavailable.

Table 2. Accuracy of diagnostic methods for endometrial Carcinoma

Method	No of Carcinoma Cases	No Diagnosed	Accuracy (%)
Vaginal and Ectocervical Smear	1,433	605	42.2
Endocervical Aspiration	545	331	72.9
Endocervical Lavage	206	168	81.6
Endometrial Brush	278	248	87.4
Gravlee Jet Washer	328	287	83.0
Vabra Aspirator	40	39	97.5
Endometrial Biopsy	456	413	90.6

Randall curettes has been used for the last three decades with diagnostic accuracy varying between 76-92%.[4,8]

Whatever the method used, the endocervical canal should be curetted separately by a curette before curetting the endometrial cavity. Before endometrial biopsy, an aspiration smear is obtained and an adequate pelvic examination is performed to assess the position, axis, and volume of the uterus and adnexa. The diagnostic accuracy of an endometrial biopsy in comparison with the cytologic screening methods is shown in Table 2.

In some cases, the patient has to be admitted to the hospital to undergo full dilatation and curettage. This is indicated whenever:

1. Endometrial biopsy fails as an outpatient procedure.
2. The sample is inadequate and a diagnosis cannot be made.
3. Endometrial biopsy shows hyperplasia.
4. Endometrial biopsy is negative but symptoms persist.
5. Persistent unexplained abnormal Pap smear.

Dilatation and curettage always should be fractionated in order to evaluate cervical involvement.

Laparotomy is indicated after a complete metastatic work-up, whenever an abnormal smear cannot be explained by the above investigations. This is done to rule out malignancy in other genital organs or the upper abdomen.

Summary

Endometrial malignant lesions or their precursors ought to be looked for in the following patients:

1. Patients at a high risk for endometrial carcinoma.
2. Women with abnormal uterine bleeding.
3. Women on estrogen replacement therapy.
4. Women with stenosed cervix.
5. Women of any age with an enlarged adnexa.
6. Postmenopausal women with a palpable ovary.

Outpatient cytologic screening and endometrial biopsy are very reliable and economical. However, if the biopsy does not give an adequate answer, fractional, dilation and curettage is indicated. In addition, if it does not explain the abnormal Pap smear, an exploratory laparotomy is indicted.

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