1. Introduction

   In the United States, cancer of the uterine corpus is the most common malignant neoplasm of the female pelvis. It is estimated that uterine cancer will develop in approximately 40,000 women this year. Hence, it will be the fourth most common cancer in women in our country. The incidence of endometrial cancer is increasing over the last three decades. More recently, deaths from uterine cancer have increased. In 1990, the American Cancer Society estimated 4,000 deaths from this disease. This increased to 6,000 in 2000. Other countries also report and increase in the incidence of endometrial cancer. Norway and Czechoslovakia report a 50–60% increase in the incidence of endometrial cancer. This increase is not likely to be the result of estrogen use as this is rarely prescribed in these countries.

2. Diagnosis

   Endometrial cancer usually presents at an early stage with vaginal bleeding. All patients with irregular bleeding or postmenopausal bleeding should have their endometrium sampled. This can be done by endometrial biopsy or formal dilatation and curettage. Today most advocate a simple office biopsy if possible. A D&C is usually reserved for cases where an office biopsy cannot be accomplished.

3. Staging

   In 1971 the staging system for endometrial cancer was devised by FIGO (Table 1). It was a clinical staging system based on examination under anesthesia, size of the uterus, and a limited number of investigations such as endocervical curettage, hysteroscopy, cystoscopy, proctoscopy and radiographic
evaluation. Many studies in the literature demonstrated that this technique resulted in significant under staging when patients were finally subjected to adequate surgical staging.2,6

4. Treatment

The cornerstone of treatment is now total abdominal hysterectomy and bilateral salpingo-oophorectomy. Most feel that a bilateral pelvic and para aortic node dissection is needed to assess disease status and plan future treatment. In the event of extraterine spread or suggestion of disease outside the uterus an omentectomy and removal of enlarged nodes is indicated.7 Prognostic variables are many and are listed in Table 3.

A retrospective study of 388 patients treated at the Mayo Clinic reported and uncommon histologic type in 52 patients (13%). The survival rate was 92% among patients with endometrioid carcinoma but for the patients with unusual histologic types it was 33%. At the time of surgical staging, 62% of the patients

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<th>Table 1. 1971 Clinical staging for endometrial carcinoma</th>
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<td>Stage I</td>
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<td>Stage 1A</td>
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Cancers should be sub grouped with respect to histologic subtype and grade of cancer

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<th>Table 2. 1988 FIGO surgical staging for endometrial carcinoma</th>
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<td>Stage IB G123</td>
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<td>Stage IC G123</td>
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<td>Stage IIA G123</td>
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<td>Stage IIB G123</td>
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<td>Stage IIIA G123</td>
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<td>Stage IIIC G123</td>
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<td>Stage IVA G123</td>
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with unfavorable histologic subtypes had extrauterine disease. Papillary serous carcinomas have a poor prognosis even in the absence of deep myometrial invasion or lymph node metastasis.

Progress in managing early stage endometrial cancer has really been made because of surgical staging and learning which patients not to treat. The controversy regarding the role of adjuvant therapy in the treatment of endometrial cancer is really centered around the thoroughness of the surgical staging. Three prospective studies have addressed the value of post operative radiation therapy and all three observed improved regional control in patients with suboptimal staging but failed to show any survival benefit. Furthermore, evidence is beginning to suggest that that pelvic external radiation therapy may no longer have a significant role in the management of patients with stage I endometrial cancer in the adjuvant setting (GOG 122).

The adoption of the current staging system has focused on the role of lymphadenectomy, in the management of endometrial cancer and the possible benefits of this therapy. The extent of the lymph node dissection has been somewhat controversial and has varied from a simple lymph node sampling to complete lymphadenectomy. Some have advocated that all patients should undergo lymphadenectomy others feel that lymphadenectomy should be reserved for those patients that have a strong likelihood of having extrauterine disease. Criteria that have been used to determine whether or not a lymph node dissection should be performed are:

1) Grade of tumor
2) Size of tumor
3) Depth of gross invasion

One review showed that if the cancer was less than two centimeters in diameter and a grade 1 or 2 lesion the likelihood of nodal spread was low. The authors felt that in the low-risk patients a lymphadenectomy could be avoided. In the 292 patients 123 had lesions less than 2 centimeters and only three in this group recurred. There were no cancer related deaths in this group. Others have also published on this issue and most studies indicate that there are about 15% of patients in whom depth of invasion and size of lesion is incorrect based on gross inspection.

The extent of lymph node dissection appears to be quite important. The current data strongly suggests that number of identified node metastases increases with the thoroughness of the lymphadenectomy. Furthermore, the number of recurrences appears to decrease with increasing number of nodes dissected. This also translates into increased survival. Kilgore and associates compared the outcomes in patients with

Table 3. Prognostic variables

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<th>Age</th>
<th>Histologic type</th>
<th>Histologic grade</th>
<th>Nuclear grade</th>
<th>Myometrial invasion</th>
<th>Vascular space invasion</th>
<th>Tumor size</th>
<th>Peritoneal cytology</th>
<th>Hormonal receptor status</th>
<th>DNA ploidy and other biologic markers</th>
<th>Type of therapy (surgery v. radiation)</th>
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four or more sites sampled and patients with no sampling. The more nodes and sites sampled enjoyed a significant survival benefit of .001 for the entire population and .001 for the high risk patient population. Furthermore, based on statistical modeling they predicted that to pick up patients in whom 5% of the nodes were involved 50% of the nodes would have to be removed. Others also have shown correlation of nodal number and survival. Hence, formal lymphadenectomies should be performed in all patients.

The current literature indicates that target based therapy is best and in order to accomplish the most accurate therapy accurate staging should be performed.

The controversy now is what is the role of chemotherapy what type of chemotherapy is appropriate for these patients. Most data indicates that chemotherapy and radiation therapy together offer the best treatment option at this time for advanced stage and high risk patients. Patients who are found to have upper abdominal disease or adnexal disease at the time of exploration for endometrial cancers should undergo a cytoreductive surgery and comprehensive staging to better treat these patients. Complete surgical resection is associated with improved survival in almost all cases. Studies demonstrate that patient with stage IV endometrial cancer who do not undergo surgical cytoreduction have a very poor prognosis. Many reports now indicate that these patients should be cytoreduced as one would treat and ovarian cancer before adjuvant therapy is administered.

References

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