Therapeutic and Staging Operations for Endometrial Carcinomas

TAKASHI NISHIDA, FRANCESCO DI RE* TORU SUGIYAMA AND MICHIAKI YAKUSHIJI

Department of Obstetrics and Gynecology, School of Medicine, Kurume University, Kurume, 830 Japan *Oncologia Chirurgica Ginecologica, Istituto Nazionale Tumori, 20133 Milano-Via Venezian 1, Italy

Received for Publication October 17, 1989

Summary: A staging error can lead to a treatment failure in the management of patients with malignant diseases. The actual progression of endometrial carcinoma was postopertaively examined in twenty patients with clinical stage II disease classified by FIGO (International Federation of Gynecology and Obstetrics) criteria. In seven of 20 patients (35%), extraterine lesions were revealed at surgery. These seven stage-up tumors included three grade 3 endometrioid cancers, three uterine papillary serous carcinomas (UPSC) and one grade 2 endometrioid tumor with deep myometrial invasion. The sites of the extrauterine lesions were determined. The grade 2 cancer was associated with parametrial invasions and positive pelvic lymph nodes. One grade 3 endometrioid tumor and two UPSCs had positive periaortic lymph nodes. Omental involvements were revealed in one grade 3 cancer and two UPSCs, indicating that the pattern of spreading of endometrial cancer with a malignant histology is similar to the spreading of ovarian cancer. Since the both endometrium and ovarian surface epithelium have a common histologic origin in the early embryonic stage, a similar biological characteristics of these tumors are suggested. From the results, it is recommended that a radical hysterectomy with periaortic lymph node dissection, omentectomy and peritoneal washing cytology be performed for endometrial cancer with a malignant histology or deep myometrial invasion to obtain the actual staging which is necessary for maximal curative potential.

Key words: endometrial carcinoma — staging operation — histological grade — UPSC — curative surgery

Introduction

The incidence of endometrial cancer has been on the increase in Japan over recent decades. Since the pattern of spread and the biological behavior of endometrial carcinomas are not fully understood, the therapeutic management including surgical methods have not been confirmed at this time. Although highly curable in its early stages, treatment results for patients with advanced disease have been disappointing and have not been improved for several decades (Pettersson, 1988).

To determine how extensive the initial surgery should be, surgically assessed tumor progressions were compared to the clinical stages obtained before laparotomy in twenty patients with stage II endometrial carcinoma.
Patients and Methods

All patients were previously non-treated, and the averaged age was 57 years old ranging from 44 to 72 years. Tumors were staged according to the rules* for clinical staging, as recommended by the International Federation of Gynecology and Obstetrics (FIGO) (Pettersson, 1988). All patients underwent a radical hysterectomy (Okabayashi, 1921) with omentectomy, periaortic lymph node dissection or sampling and peritoneal washing cytology. To determine the actual tumor progression, tissues obtained during surgery were thoroughly examined, and postsurgical TNM classifications (Hermanek and Sobin, 1987) were recorded for all cases. If extrauterine disease was present, the tumor characteristics including histology, grade, depth of myometrial invasion and sites of the extrauterine lesions were examined.

Tumor tissues were graded by the standard grading criteria from the World Health Organization (WHO) (Poulsen and Taylor, 1975). Since the WHO histological typing of uterine tumors does not include papillary serous type carcinoma (UPSC: uterine papillary serous carcinoma) in the category of endometrial tumors, cancers in this group were graded by the classical Broders' grading system (Broders, 1925).

Results

The tumors included seven grade 1 endometrioid carcinomas, five grade 2, five grade 3 and three UPSCs (one grade 1, grade 3 and one grade 4). In thirteen patients with endometrioid carcinomas (seven grade 1, five grade 2 and two grade 3 tumors without deep myometrial invasion), the FIGO clinical stages accurately reflected the actual tumor progression confirmed at surgery. In seven patients, extraterine tumor progressions were revealed at laparotomy. These stage-up cases included three pT3 and four pT4 cancers by TNM classification, and the profile is summarized in Table 1.

One grade 2 endometrioid carcinoma with deep myometrial invasion was associated with parametrial invasion and positive pelvic lymph nodes. The histology of the other tumors with extraterine spreading was grade 3 endometrioid carcinoma or UPSC. One grade 3 cancer and two UPSCs showed positive periaortic lymph nodes. Omental involvement was found in one grade 3 cancer and two UPSCs (one grade 1 and one grade 4).

In the seven tumors with extraterine spreading, all except one grade 3 endometrioid carcinoma (case 2) showed positive peritoneal washing cytology.

TABLE 1

<table>
<thead>
<tr>
<th>case</th>
<th>histology</th>
<th>depth of invasion</th>
<th>parametrium</th>
<th>pelvic node</th>
<th>periaortinc node</th>
<th>omentum</th>
<th>washing cytol.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ENDO. G2</td>
<td>over 1/2</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>2</td>
<td>ENDO. G3</td>
<td>over 1/2</td>
<td>-</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>ENDO. G3</td>
<td>over 1/2</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>4</td>
<td>ENDO. G3</td>
<td>over 1/2</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>5</td>
<td>*UPSC G1</td>
<td>under 1/2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>6</td>
<td>UPSC G3</td>
<td>over 1/2</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>+</td>
</tr>
<tr>
<td>7</td>
<td>UPSC G4</td>
<td>over 1/2</td>
<td>-</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

ENDO. G2: endometrioid carcinoma, grade 2

*UPSC (uterine papillary serous carcinoma) was graded by Broders' grading system.
Discussion

It is important to realize that an underestimation of tumor progression may lead to a treatment failure in the management of patients with malignant diseases. In this relatively small study, seven of twenty patients with clinical stage II endometrial carcinoma had extraterine disease. The actual tumor progression of the endometrial carcinoma in this group was strongly related to the tumor histology, as well as the depth myometrial invasion. Six of seven patients with extraterine lesions had a carcinoma with malignant-type histology (three grade 3 endometrioid carcinomas and three UPSCs). The remaining grade 2 cancer with extraterine lesions was associated with deep myometrial invasion.

Of interest, one grade 1 UPSC had omental implantation without spreading to any other extraterine site. This and high positive rate with peritoneal washing cytology indicates the potential for intraperitoneal spreading of an endometrial carcinoma. The similar biological characteristics of endometrial cancer and ovarian epithelial carcinoma are currently receiving increasing attention (Resta et al. 1987). Histogenetically, both the endometrium and the covering epithelium of the ovary are derivatives from the coelomic epithelium and it was suggested that both tissues may be affected by common oncogenic stimulation, such as hormonal impacts. When considering these similarities between the endometrium and the ovarian surface, it is reasonable to suppose that both endometrial and ovarian cancers have a similar pattern of spreading.

From the results, it is recommended that a radical hysterectomy with periaortic lymph node dissection, omentectomy and peritoneal washing cytology be performed for endometrial carcinoma with malignant histology or deep myometrial invasion to obtain accurate staging that is necessary for curative potential.

Addendum: *The Committee of FIGO has recently changed the staging criteria of endometrial cancer. Since endometrial carcinoma is now surgically staged, preoperative staging procedures previously used are no longer applicable (FIGO News, 1989).

This study was presented at the XIIth Asian & Oceanic Congress on Obstetrics and Gynecology in Taiwan in December 1989.

Acknowledgment: This work was supported by the Encouraging Grant from the Fellowship of Department of Obstetrics and Gynecology of Kurume University.

References


