The Role of Hysteroscopy in Gynecologic Oncology

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Based on personal experience in 80 performed hysteroscopies, the clinical applicability of this technique is discussed, and found useful in the diagnosis of the early stages of endometrial cancer, in differentiation between endocervical and endometrial adenocarcinoma, and in evaluation of the results of radiotherapy.

In a 100-year history of the application of hysteroscopy, the last two decades have been characterized by an increased intensity of research and recently this technique has reached a significant role as "aide-de-camp" in the diagnosis of endocervical and endometrial pathology [1–3].

The use of hysteroscopy for the diagnosis of the early stages of uterine corpus cancer and for the evaluation of the cancer clinical advancement, type of process, and localization confirmed the applicability of this technique in gynecologic oncology departments [4–6].

The aim of this work was an analysis of the results of 80 hysteroscopies, performed in the Gynecologic Oncology Department of the Oncologic Institute in Warsaw.

MATERIALS AND METHODS

Hysteroscopic examination was performed in 80 women aged 36 to 80 years. They were divided into three subgroups, considering the aim of the examination.

Group I consisted of 31 patients with diagnosed uterine corpus carcinoma, with the stage of clinical advancement determined by clinical examination or hysteroscopy and biopsy. In these women hysteroscopy was performed in order to determine the real cancer advancement, evaluating the state of the endocervix.

Group II included 18 women with diagnosed endometrial carcinoma after treatment by radiotherapy and before planned hysterectomy. In these cases the hysteroscopy aimed to evaluate the state of the cervical canal and the uterine cavity. The results of these examinations were compared with the microscopic pattern of the excised specimens.

Group III consisted of 31 women, who had hysteroscopy as a means of initial diagnosis. In 23, the examination was performed in order to exclude the presence of a primary neoplastic process in the uterine corpus; in 8, abnormal uterine bleeding was the cause of the examination.
The hysteroscopy was performed using the Storz apparatus, permitting collection of selective biopsy as well as photographic documentation. The examinations were performed under general anesthesia. The hysteroscope was inserted into the uterine cavity after dilatation of the cervical canal to 0.6 cm diameter (Hegar dilatator No. 6). The uterine cavity was inflated for free manipulation with carbon dioxide (Hysteroflator 1000 apparatus) and a constant tension of 60–70 mm Hg was maintained during examination of the uterine cavity.

In the course of hysteroscopy, selective (fractioned) biopsy was collected from suspected areas. After examination, curettage of the uterine canal and cavity followed and the material was examined microscopically.

RESULTS

Table 1 presents the results of hysteroscopy in Group I—inspection of the cervical canal considering the spread of endometrial carcinoma (Table 1). In a group of 22 women with initial diagnosis of uterine corpus carcinoma stage I, in 6 cases the neoplastic outgrowth was seen in the endocervix (supported by microscopic examination of biopsy material) which fact, in turn, altered the primary classification to stage II. In another subgroup of 9 women, with primary diagnosis of carcinoma corporis uteri stage II, in 2 cases neither hysteroscopy nor the microscopic examination confirmed the presence of the neoplasm in the cervical canal, thus the initial diagnosis was changed to stage I.

In Group II, consisting of 18 women, after telecobaltotherapy in 7 of them signs of neoplastic process were absent in hysteroscopy (Table 2). In 6 of these 7 women, consequent microscopic examination of the excised uterus demonstrated full destruction of the neoplastic tissue. In 1 case only, the microscopic examination was inconsistent with the hysteroscopic picture—the neoplastic tissue was found undestroyed. In the other 11 women of this group, hysteroscopy revealed a persistent neoplastic process in different stages of advancement. In excised specimens collected during hysteroscopy as well as in excised uteri histological examination confirmed living cancer tissue in all these cases.

In the third group, 12 women submitted to hysteroscopic examination in order to exclude the suspicion of neoplastic process in the uterine cavity. In 8 patients, the examination revealed 1 case of uterine corpus carcinoma in early stage, three cases of endometrial polyps, 2 cases of endometrial glandular hyperplasia, and

<table>
<thead>
<tr>
<th>Initial diagnosis</th>
<th>Number of cases</th>
<th>Cervical extension in hysteroscopy</th>
<th>Number of cases where the stage of cancer was changed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carcinoma corporis uteri stage I</td>
<td>22</td>
<td>6</td>
<td>6 (27.0%)</td>
</tr>
<tr>
<td>Carcinoma corporis uteri stage II</td>
<td>9</td>
<td>7</td>
<td>2 (22.0%)</td>
</tr>
<tr>
<td>Total</td>
<td>31</td>
<td>13</td>
<td>8 (26.0%)</td>
</tr>
</tbody>
</table>
### Table 2

**Hysteroscopy in Cases of Uterine Corpus Cancer after Teleradiotherapy**

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Number of cases</th>
<th>No evidence of disease in hysteroscopy</th>
<th>Hysteroscopy vs histopathology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carcinoma corporis uteri stage I</td>
<td>8</td>
<td>4</td>
<td>8 (Consistent)</td>
</tr>
<tr>
<td>Carcinoma corporis uteri stage II</td>
<td>10</td>
<td>3</td>
<td>9 (Consistent)</td>
</tr>
<tr>
<td>Total</td>
<td>18</td>
<td>7</td>
<td>17 (95.0%) (Consistent)</td>
</tr>
</tbody>
</table>

2 cases of endometritis chronica. In 4 women where microscopic proof of metastatic foci was present (lymph nodes, ovaries, etc.), hysteroscopy was performed in order to exclude the primary focus of neoplasm in the uterine cavity. In none of these did hysteroscopy reveal endometrial cancer. In these 4 cases further examinations detected other-than-endometrial primary foci of the neoplasm, thus confirming the role of endoscopic diagnosis.

In 19 other women from the third group, the microscopic pattern of adenocarcinoma was found in biopsy material from the cervix without precise localization of the neoplasm's origin. In 11 cases, hysteroscopy ruled out the possibility of neoplasm in the uterine corpus, establishing in consequence the proper diagnosis of uterine cervix adenocarcinoma. In the other 8 cases the neoplastic growth was found in the uterine cavity, and the excised material confirmed the diagnosis of stage II endometrial cancer.

**DISCUSSION**

The demonstration of neoplastic spread from the uterine corpus into the cervix is of great importance, for it permits a more precise qualification of subjects to stage II of cancer advancement. Such qualification brings, in consequence, a more aggressive therapeutic attitude in several oncological centers. In the majority of cases, the qualification to stages of clinical advancement is based on the results of selective curettage (biopsy), and sometimes hysterography is performed. Both techniques bear certain errors [6]. Additional data provided by endoscopy can decrease errors, allowing the choice of more adequate forms of therapy for these patients.

In the presented material, hysteroscopy, performed for evaluation of cancer spread in the uterus, brought a change of primary diagnosis and stage in 8 of 31 examined women (26%). This confirmed the opinion about the inadequacy of the routine qualification procedures. The highest rate of erroneously qualified subjects was in the group where the initial diagnosis was that of stage I of endometrial cancer (in 6 out of 22, the diagnosis was changed to stage II following hysteroscopy). In these women telecobaltotherapy was supplemented by intrauterine curietherapy, followed by hysterectomy.

In the group where the initial qualification of cancer advancement was that of stage II, in 2 cases out of 9 the spread of the neoplasm into the endocervix...
was not confirmed, in consequence, the therapy was limited to preoperative telegammatherapy.

Hysteroscopy performed in women with uterine corpus carcinoma treated first by radiotherapy, when evaluation of the efficacy of the radiotherapy was the purpose, demonstrated a high conformity of results with the microscopic findings, both in biopsy and excised specimens. In 1 case only (out of 18), the result was different. This case concerned a women with diagnosed stage II of clinical advancement, where endoscopy did not reveal neoplastic changes in the uterine cavity, while microscopic examination of the excised uterus found living neoplastic tissue localized in the uterine muscle, at the base of a small myoma. This demonstrated the diagnostic range of hysteroscopy which is limited to the survey of the uterine canal and cavity surfaces.

Analysis of the results in a group of 8 women, where the hysteroscopy was performed because of abnormal uterine bleeding, demonstrated the value of endoscopy in this field. Hysteroscopy permitted us to demonstrate and localize the pathologic changes in the endometrium, thus making the selective curettage more accurate. The studied group was small, nevertheless, the diagnosis of one case of uterine corpus carcinoma in this group would favor the diagnostic adequacy of this technique. Sugimoto [3] in a study of 4000 endoscopic examinations, diagnosed uterine corpus carcinoma in 53 cases, but it must be considered that Sugimoto's endoscopic examinations were performed because indications of other than uterine bleeding too.

In the third discussed group, the use of endoscopy as a diagnostic method is best used where the diagnosis of adenocarcinoma is established in histopathological examination, but the origin of cancer is unknown. Out of 19 patients, in 11 the origin of adenocarcinoma was endocervix.

CONCLUSIONS

The initial evaluation of the applicability of hysteroscopy in the gynecologic oncology department stressed the value of endoscopy under the following conditions: (1) in the classification of women as stage I or II of clinical advancement of the endometrial carcinoma; (2) in early diagnosis and in evaluation of radiotherapeutic efficacy in cases of uterine corpus adenocarcinoma; and (3) in the differentiation between the endocervical and endometrial adenocarcinoma.

REFERENCES