Use of the Cornier pipelle as the only means of presurgical histologic diagnosis in endometrial carcinoma: agreement between initial and final histology

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Summary

Objective: To test the reliability of the Cornier pipelle as a diagnostic tool for submitting endometrial carcinoma patients directly to surgery, without the additional performance of dilatation and curettage.

Methods: In this prospective study, 56 consecutive patients with the presumptive diagnosis of endometrial carcinoma, based on the analysis of material sampled by means of microcurettage using the Cornier pipelle, were submitted to hysterectomy. The findings of the final pathological report were compared with those of the previous microcurettage. Both were analysed at the same Pathology laboratory throughout the study. The presence of endometrial carcinoma was confirmed intraoperatively in all cases, and, as a consequence, a staging laparotomy was completed in all of them.

Results: Although the initial diagnosis of carcinoma was confirmed in every case (100% sensitivity), the final pathological report revealed discordant histological subtypes in 6 out of the 56 cases (10.7%). Only two, however, represented higher histological risk than initially stated. Discrepant grading values were also found in 3 out of 41 (7.3%) cases of the endometrioid subtype for which tumor grade been established in the microcurettage specimen. Not performing dilatation and curettage under general anesthesia prior to surgery resulted in a significant saving, both in hospitalization costs and bed occupation.

Conclusion: When endometrial sampling by means of the Cornier pipelle yields the diagnosis of carcinoma, it can be confidently relied upon. However, some high-risk cases can be missed due to discordance between initial and final histology, and this could eventually lead to the choice of an inadequate surgical strategy.

Key words: Endometrium; Carcinoma; Microcurettage; Pipelle.

Introduction

Endometrial sampling by means of the Cornier pipelle is an outpatient procedure which is well tolerated and yields enough material for histological diagnosis in a high proportion of cases [1]. However, its inability to obtain an adequate sample in every case has precluded its use as a screening tool for endometrial carcinoma [2]. The aim of our prospective study was not endometrial cancer screening, but rather to analyse those cases where enough material and a clear histologic diagnosis had been obtained in symptomatic patients by means of pipelle microcurettage. We wanted to know if a positive diagnosis obtained using this simple and cost-effective method was reliable enough to submit the patients directly to surgery, without the need of performing an additional dilatation & curettage (D&C), which up to now has been the standard procedure in these cases. If this were so, not only hospitalization costs would be saved, but also time, as well as the additional risks due to general anesthesia necessary for most cases of D&C.

Materials and Methods

We performed a hysterectomy on 56 consecutive patients at Universidad del País Vasco, Bilbao, Spain, after a diagnosis of endometrial carcinoma had been obtained in each case by means of microcurettage using the Cornier pipelle. If the diagnosis was confirmed intraoperatively, a staging laparotomy including peritoneal washings, bilateral salpingo-oophorectomy and lymph node sampling was completed.

The findings of the final pathological report were compared with the ones obtained from the microcurettage material. The Pathology department processing all material (microcurettage and surgery) was the same in every case, so that discordances due to different diagnostic criteria or different protocols could be ruled out. The specimens were sent in without any special notice regarding the fact that they formed part of a study, so that the standard routine procedure was followed with all of them, and no "special interest" was taken in the analysis.

Results

The initial diagnosis of carcinoma was confirmed in all 56 studied cases (100% agreement). The final histology was as follows: 50 endometrioid adenocarcinomas; 2 serous papillary carcinomas; 2 clear cell carcinomas and 2 adenosquamous carcinomas. However, there were some differences between initial and final diagnosis regarding the histological subtype, and in the case of endometrioid carcinomas, between initial and final tumor grade. The histological subtype was different in 5/56 cases (10.7% discordance, Table 1). In contrast, there were only 2 cases out of 41 endometrioid carcinomas with grading in the curettage report for which tumor grade was different in the surgical report (4.7% discordance). Moreover, the disagreement was between G1 and G2, and thus with no impact on possible treatment deci-

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sions (at least according to our protocol, which mandates for a systematic lymphadenectomy only in those cases with G3 tumor or deep myometrial invasion).

The estimated cost at our centre of a dilatation and curettage under general anesthesia, which is carried out as a programmed inpatient procedure (1 day hospitalization, 1 hr operating suite, 1 general anesthesia) is 2,000 Eur. Multiplied by 56, this amounts to a total saving for the hospital of at least 100.000 Eur., if we deduce the cost of the Cornier pipelles (2 Eur. each) and 20 minutes office time per procedure. Moreover, 56 bed-days (roughly a free hospital bed for two months) were also gained by this means.

Discussion

Since its introduction as a convenient outpatient procedure, Cornier pipelle endometrial sampling accuracy has been evaluated in a number of studies. Gordon & Westgate [3] prospectively investigated the microcurettage yield in 100 patients presenting either with abnormal menstrual bleeding, intermenstrual or postcoital bleeding, or postmenopausal bleeding. Their overall failure rate was 33% and, moreover, one of two endometrial carcinoma cases of the study went undetected by the procedure. From these figures one might conclude that pipelle sampling is completely inadequate as an alternative to dilatation and curettage. However, results from other comparative studies, carried out on patients with a known diagnosis of endometrial carcinoma, found pipelle sampling to obtain adequate specimens for histological diagnosis in 95-97% of cases [2, 4]. The diagnostic accuracy according to these and other similar reports [5] was uniformly high, with only one exception [6]. Sensitivity for detecting endometrial carcinoma, if an adequate sample had been obtained, ranged between 95% and 97.5%. In the only just cited discrepant study [6], pipelle sampling failed to demonstrate endometrial carcinoma in 33% of cases, for a sensitivity of only 67%. However, it is interesting to note that even in this study, the authors praised the time, costs and inconvenience for the patients saved by a positive biopsy. We intended to go a step further, following this same line, and analyzed whether such a positive diagnosis, once obtained, could be reliable enough to submit the patient directly to a staging laparotomy, without any further confirmation. The answer depends on the management protocol followed at any given center. If all endometrial carcinoma patients are surgically staged, including a systematic lymphadenectomy, then the answer can only be yes. Since all carcinoma diagnoses were confirmed in the final pathological report, no cancer would have been missed by this approach. However, reality is often different. Since most patients carrying well-differentiated endometrioid adenocarcinomas invading less than 50% of the myometrium will be cured by hysterectomy alone, the present tendency is not to submit them to a complete staging, including lymph node dissection. This more aggressive approach is reserved in most centers for those patients with G3 endometrioid carcinomas, those invading the myometrium deeply (regardless of differentiation), and those with carcinomas belonging to a less frequent, more aggressive histological variety (clear cell, adenosquamous or papillary serous) [7]. Moreover, many endometrial carcinoma patients are old, obese, and carry a variety of other medical conditions that make them unsuitable for extended surgery, if the presumed benefit derived from it does not compensate for the risks. The trend is therefore rather to err on the conservative side, if the chance of nodal involvement is not very high. If such an attitude is followed, then it is of paramount importance not to miss any high-risk cases. In this sense we look upon our results with mixed feelings. In fact, as can be seen from Table 1, two cases from our series would have been misclassified as low risk if we had relied solely on the microcurettage histology.

In conclusion, if we obtain a positive diagnosis of endometrial carcinoma by means of Cornier pipelle microcurettage, it is almost certain (100% in our experience) that we are, indeed, facing this condition. However, data regarding the histological variety and the degree of differentiation cannot be relied upon completely. If these are used to tailor the individual treatment schedule, additonal diagnostic refinement is necessary.

Table 1. — *Histological diagnosis in cases showing discrepancy between the microcurettage and the surgical specimen.*

Microcurettage diagnosis	Final diagnosis
1. clear cell	endometrioid, G3
2. endometrioid, G1	papillary serous (*)
3. papillary serous	clear cell
4. endometrioid (no grade given)	adenosquamous (*)
5. papillary serous	clear cell

(*) = cases in which the discrepant diagnosis could have influenced the therapeutic approach.

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