

Case report

Gastric carcinoma detected by cervical cytology

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This paper is a report on a case of gastric carcinoma of diffuse type in a young female patient aged 38. The patient was still asymptomatic at hospital admission, her only pathological sign being the finding of malignant cells of indeterminate origin at a routine Pap-test examination. Subsequent investigations showed the presence of a poorly differentiated gastric carcinoma, with metastatic diffusion to uterus, ovaries and peritoneum. Only a few cases of gastric carcinomas without cervical localization, detected by Pap-test, are reported in literature. A few other cases with cervical localization have been described. The aim of this work is to point out that a Pap-test smear may reveal the presence of extragenital tumors still unappreciated. [© 2000 Lippincott Williams & Wilkins.]

Key words: Extragenital tumor, gastric carcinoma, Pap-test.

Introduction

The female genital tract is not frequently involved by metastatic extragenital tumors. The ovary is most frequently affected. Approximately 10% of all ovarian carcinomas are reported to be secondary.¹ Mazur² has reported 149 cases of metastases in the genital tract from extragenital cancers, 75% of which affected the ovary and 8% affected the uterus (cervix and corpus). The two most frequent primary sites are the breast and the GI tract. Metastases from the stomach to the ovary or to the Douglas pouch are well known, while metastases to the uterus body or cervix are extremely rare.^{3–8} The Pap-test examines exfoliated cells from the uterine portio and from the cervical canal—an easy,

economical and efficient test for the detection of cervical cancer and precancerous lesions. The Pap-test may also reveal an endometrial carcinoma and less frequently but not exceptionally a tubaric, ovarian or extragenital tumor.^{9–13}

This work is a report on a case of a primary stomach cancer metastatic to the uterus, detected through routine Pap-test examination.

Case report

A 38-year-old woman, gravida 2 para 2, had undergone a routine Pap-test. She had been suffering from irregular postprandial epigastric pain, with long digestion and loss of weight (about 3 kg) for about 2 years. The upper GI X-rays were always negative and no gynecological problems were reported. Cervical smear showed the presence of atypical squamous cells, probably of epithelial origin (Figures 1 and 2). The patient was then subjected to colposcopy with biopsy of the portio, endocervix and endometrium, which revealed the presence of a poorly differentiated carcinoma of epithelioid origin, infiltrating the endometrial stroma. Immuno-histochemical patterns and morphology suggested the endometrial localization of an ovarian cancer. Pelvic examination did not show any relevant alteration. Blood count as well as liver and renal function tests were normal. A slight increase in CEA and CA-125, and a remarkable increase in CA 19-9 (GICA) were found.

The patient was subjected to laparotomy, showing a regular uterus, normal adnexa and no masses in the pelvis. No lesions were found in the abdominal viscera. Only pelvic and lombo-aortic nodes showed increased volume and consistence. Hysterectomy and bilateral salpingo-oophorectomy were performed, with random biopsies of the peritoneum, Douglas

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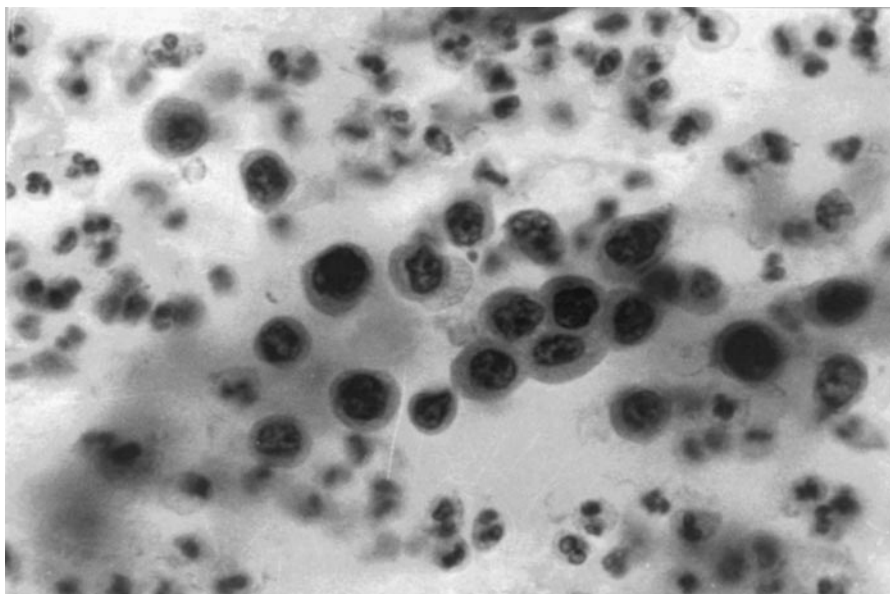


Figure 1. Cervical smear: atypical poorly cohesive cells and few granulocytes on the background (Papanicolaou stain, $\times 320$).

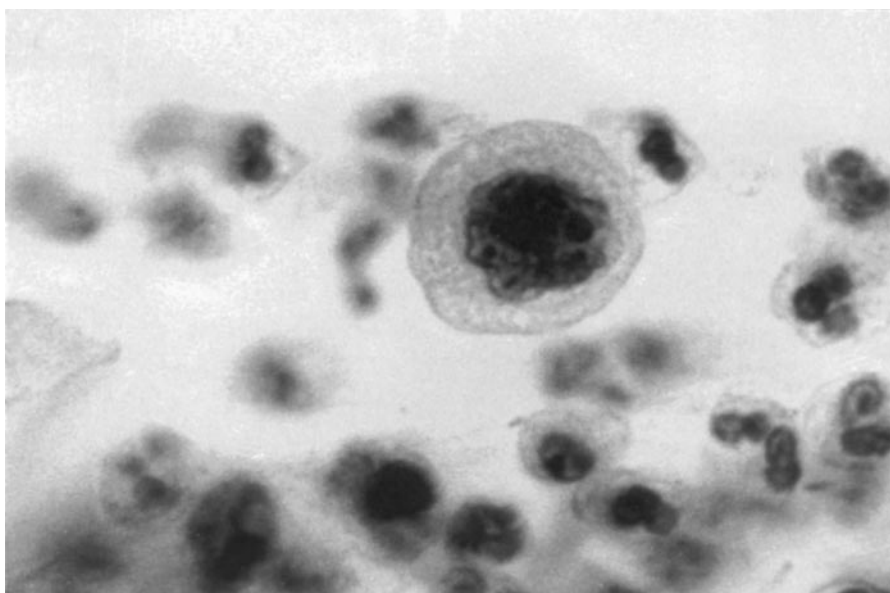


Figure 2. Cervical smear: large atypical cell with foamy cytoplasm and irregularly indented nucleus (Papanicolaou stain, $\times 800$).

pouch, omentum, lombo-aortic and iliac nodes, and peritoneal washing. Histological examination revealed:

- Poorly differentiated adenocarcinoma with focal aspects of signet-ring cells, diffusely infiltrating myometrium, parametrium and endometrium.
- Focal neoplastic localizations to the omentum, right ovary and Douglas.
- Massive metastasis to the external iliac and lombo-aortic nodes.
- Malignant tumoral cells in peritoneal washing.

It was thus a secondary uterus-ovarian-peritoneal and nodal localization of a cancer of unknown origin.

Chest X-rays, liver and thyroid ultrasound examination, abdomen and pelvis computed tomography

scan, and mammography and mammary ultrasound examination were then performed, but no lesions were found. Colonoscopy was negative, while upper GI endoscopy showed 'reduced elasticity of the body and fund walls, with thickened folds'. Multiple biopsies were performed, one of which showed the presence of a microfocal poorly differentiated carcinoma to the body-fund (Figure 3).

Diagnosis was then made of 'Gastric carcinoma with metastatic localization to the uterus, ovaries and peritoneum'.

Treatment with ECF regimen for five courses resulted in good subjective improvement and almost total normalization of tumoral markers. During the sixth course, however, a rapid increase of such markers was observed, followed by an occlusive intestinal episode. The patient was then subjected to relaparotomy, showing evidence of diffuse peritoneal carcinomatosis, with extrinsic stenosis of the transverse colon and of an ileal loop.

The patient's condition then worsened and she died 9 months after diagnosis.

Discussion

Although the Pap-test examines cells from the uterus portio and endocervical duct, cells from endometrium or, exceptionally, from the ovary can be found in the smear. Furthermore, the Pap-test may rarely reveal the

presence of an extragenital tumor. Watson has suggested that malignant cells may gain access to the cervix either by migration of the cells through the lumen of the Fallopian tubes or by metastasis to uterus or cervix.¹⁴

Ng has reported 66 cases of extragenital malignant cells observed on cervical smears, only one of which was of gastric origin. Forty-eight patients did not show any uterine or vaginal metastases.⁷

Song and Selvaggi have reported 10 cases of extrauterine malignant cells in the vaginal smear, with no evidence of metastases in the uterus or cervix.^{11,12}

McGyll has reviewed the cases reported in the literature, finding 10 cases of gastric carcinoma metastasized to the uterus with positive cervical-vaginal cytology, only one of which was limited to the endometrium.^{6,15}

The case we have reported is exceptional because the Pap-test was positive due to microscopic metastasis only to the body (myometrium-endometrium), while the cervix was not involved. Furthermore, the positive Pap-test was the first sign of a disease which was already rather extended while almost completely silent. Since pelvic examination and colposcopy were negative, the patient underwent portio, endocervix and endometrium biopsy, suggesting the presence of high-grade tumor of the uterus body (myometrium or endometrium) or of a metastasis. Only the subsequent histological examination showed a poorly differentiated adenocarcinoma with focal aspects of signet-ring cells diffusely infiltrating the myometrium, parametrium and endometrium. This suggested a possible

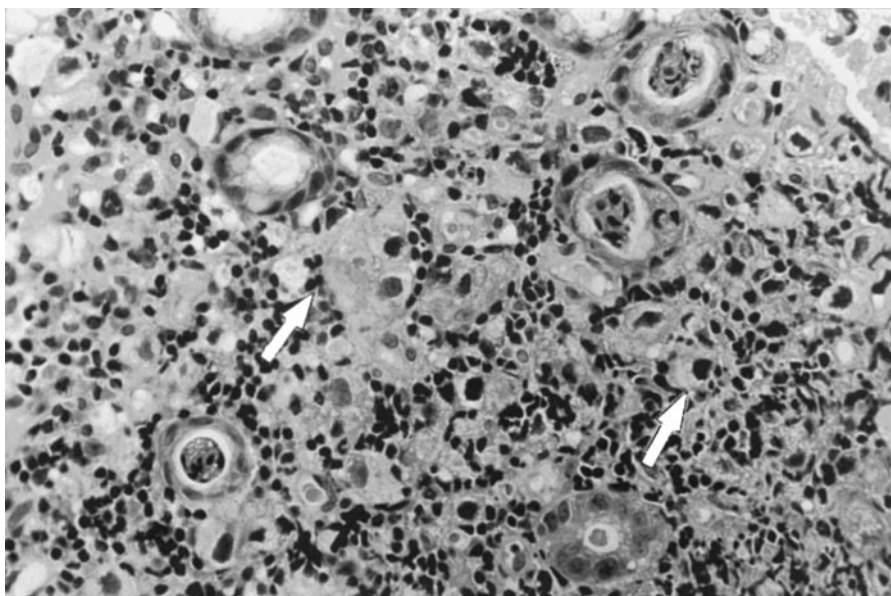


Figure 3. Gastric biopsy: rare carcinoma cells with foamy cytoplasm in chronic gastritis (hematoxylin & eosin, $\times 320$).

metastatic localization from breast or the GI tract. Gastrosocopy was basically negative—only one of the many biopsies revealed the presence of microfocal poorly differentiated carcinoma.

Conclusion

The Pap-test, used as a screening test for early diagnosis of cervical carcinomas, may reveal extra-genital tumors, either metastatized to the uterus or cervix, or exfoliating into the peritoneum.^{6,7,9-19} Such tumors are often clinically silent and may remain hidden for a long period of time.^{20,21} Therefore, although the clinical case reported herewith is quite rare, it should remind the clinician that the Pap-test may occasionally first detect the presence of a silent extragenital tumor.

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