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Intraperitoneal spread of cervical carcinoma after laparoscopic lymphadenectomy

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Although technical improvements have broadened the use of operative laparoscopy, the safety of this surgical technique in the presence of malignancy has not yet been evaluated fully. A potential complication of this procedure was highlighted in a summary of seven cases of abdominal-wall tumor implantation after laparoscopy in patients with gastrointestinal and gynecologic malignancies.[1] In addition to port-site recurrence, intraperitoneal seeding of an otherwise localized malignancy may occur.

Case

A 34-year-old woman was diagnosed with invasive cervical adenocarcinoma after cervical biopsy. Examination under anesthesia demonstrated a stage IIB lesion. At laparoscopic staging 2 weeks later, two right pelvic nodes revealed metastatic crcinoma. Para-aortic nodes were negative for malignancy. Inspection of the ovaries and peritoneal surfaces, including the liver and diaphragm, was normal. Treatment included external-beam extended-field radiotherapy with concurrent cisplatin, followed by brachytherapy. Upon completion of radiotherapy, an adjuvant hysterectomy was scheduled. At laparotomy, there was nodularity on the diaphragm and liver, and frozen sections of these nodules demonstrated carcinoma.

Comment

In an effort to evaluate more completely the potential for tumor implantation during laparoscopy, Childers et al[1] reviewed retrospectively 105 laparoscopic procedures in patients with known malignancies, the majority of whom had intraperitoneal disease. All of the intraperitoneal malignancies were adenocarcinomas except for one recurrent cervical squamous cell carcinoma. Of the 437 punctures performed during the 105 laparoscopies, one case of abdominal-wall implantation of papillary serous adenocarcinoma of the ovary was reported, corresponding to a rate of 0.3% per puncture site, or 1.1% per procedure, in the presence of intraperitoneal malignancy.

There has been one other report[2] of umbilical metastasis after laparoscopy in a patient with a stage IB cervical squamous cell carcinoma, who underwent laparoscopy to determine the cause of cul-de-sac nodularity. This patient did not have intraperitoneal disease at the time of laparotomy. After receiving external-beam radiotherapy and brachytherapy, the patient had a persistent mass in her umbilicus. Surgical evaluation demonstrated metastatic carcinoma in the umbilical port site, with no evidence of other intraperitoneal disease.

We present a woman with stage IIB adenocarcinoma of the cervix who had diaphragmatic metastases found subsequently outside the radiation treatment field. Although it is possible that microscopic metastases were present at initial staging, we speculate that dissemination of tumor cells at laparoscopic resection of lymph node metastases may have contributed to intraperitoneal seeding.

A MEDLINE search failed to uncover previous reports of intraperitoneal tumor metastases after laparoscopic staging of cervical carcinoma. Feasibility studies have indicated that laparoscopic lymphadenectomy can accomplish accurate surgical staging with minimal morbidity.[3,4] However, further study is required to address potential complications and to identify specific indications for the procedure. It is clear from this case that additional investigation is needed to address specifically the issue of potential intraperitoneal contamination by tumor cells after laparoscopic lymphadenectomy.

References

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