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Anti-adhesive film mimicking local recurrence during follow up after surgical treatment of gynecologic malignancy

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Summary

A 51-year-old woman received a laparoscopic surgical staging operation due to endometrial carcinoma. Adjuvant pelvic radiotherapy was performed when the endometrial carcinoma was staged at FIGO Stage IIIC1, adnexa metastasis. Three months completing adjuvant pelvic radiotherapy, a 2.5-cm vaginal stump mass was found by abdomino-pelvic computed tomography (AP-CT). To rule out local recurrence, diagnostic laparoscopic exploration was performed. The pathologic report revealed chronic inflammation due to the presence of a foreign body. To avoid unnecessary surgery during the follow-up of patients with gynecologic malignancies, anti-adhesive material should be avoided which can possibly cause a lesion mimicking local recurrence.

Key words: Anti-adhesive material; Foreign body; Local recurrence.

Introduction

There is an increasing trend to use anti-adhesive materials during gynecologic malignancy surgeries to reduce adhesion-induced complications. Despite the expanding usage of various kinds of materials, there are only a few reports regarding complications or imaging artifacts of caused by anti-adhesive materials.

SurgiWrap, one of several anti-adhesive materials, is a biodegradable polymer film which is used to reduce adhesion, and is subsequently metabolized to lactic acid, CO_2 and water after a resorption period of up to six months [1].

The follow up period for finding recurrences after cancer treatment is a critical point to decide further treatment and determine prognosis, especially in the oncology of gynecological malignancy. The authors report a case with confusion between a local recurrence and a foreign body, caused by anti-adhesive film, during this critical period.

Case Report

A 51-year-old woman received a total hysterectomy, bilateral salpingo-oophorectomy, pelvic and para-aortic lymph node dissection, and multiple excision of seeding tumors in the cul-de sac. Before closing the abdominal wall, polylactic acid (SurgiWrap) was placed. A pathologic report showed undifferentiated endometrial carcinoma with metastasis to the right pelvic lymph nodes. FIGO Stage IIIC1 was confirmed pathologically and the patient received adjuvant pelvic radiotherapy.

After completing adjuvant radiotherapy, there was no evidence of tumor recurrence until the next follow up date. Three months later after treatment, a regular abdomino-pelvic computed tomography (AP-CT) follow up image showed a 2.5-cm vaginal stump mass presumed to be a local recurrence (Figure 1). To obtain pathological confirmation of the lesion, a diagnostic laparoscopic exploration was performed, and the brownish-tan aggregated tissue was excised (Figure 2). Complete pathologic examination revealed no evidence of malignancy, while the contents of the stump "mass" were identified as a foreign body material combined with chronic granulomatous inflammation (Figure 3). The patient was discharged two days after the laparoscopic operation without any complications.

Discussion

Recently, developments in anti-adhesion products and the use of such agents has been increasing. These anti-adhesive materials (films and gels) are placed on separate traumatized peritoneal surfaces during the critical period of adhesion development, three to five days after surgery.

In the case of SurgiWrap, with the exception of one preclinical study in 44 rats [2], published data on its safety or efficacy in reducing peritoneal adhesions are lacking. Furthermore, there have only been a few reported cases of complications due to anti-adhesive agents. There was one study examining the use of a polyactic bioabsorbable sheet (SurgiWrap), an adhesion barrier, and evaluating adverse reactions with regards to its use. The report showed that post-surgical protrusions of SurgiWrap outside the vaginal stump seemed to be related to infections of the vaginal stump [3]. Shaltz *et al.* addressed a case where a surgical implant, polylactic acid, masqueraded as recurrent uterine sarcoma after a

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Figure 1. — AP-CT showing a 2.5 cm sized nodule in the cul-de-sac (black arrow).

Figure 2. — Laparoscopic view of the foreign body in the cul-de-sac.

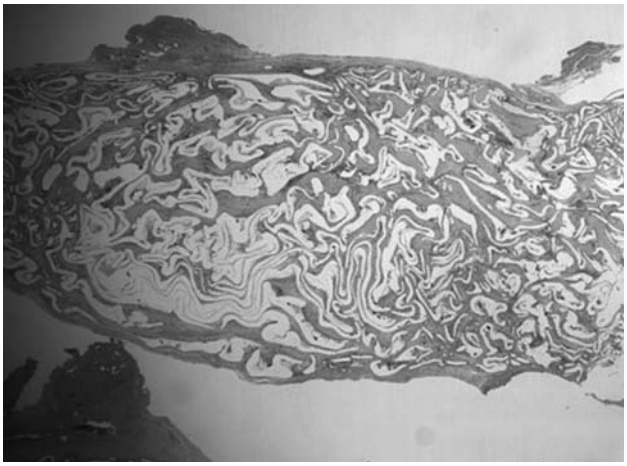

Figure 3. — Excision specimen is composed of fibrous tissue with inflammation and meandering space (x12.5). The space-filling material was revealed by reducing the amount of light (contrast). These findings are consistent with foreign body granuloma.

hysterectomy on a CT and a subsequent positron emission tomographic (PET) scan [4]. These imaging utilities are important tools for the identification of suspected cancer recurrence, to increase treatment, and decrease morbidity from monitoring of disease recurrence, especially in gynecologic cancer.

Recurrence rates in patients with early-stage endometrial cancer range from 2–15% and reach as high as 50% in advanced-stage patients. Many local recurrences from endometrial cancer are curable; therefore, discovery at and diagnosis at an ideal time is critical. As used in the present case, adhesion barriers are commonly located around the vaginal stump area, which is the most recurrent area in endometrial cancer. Typically, surveillance guidelines of endometrial cancer are more intensive for the first few years after surgery because many studies have shown that most (70–100%) recurrences occur within three years after primary treatment [5]. Likewise, 62% to 89% of cervical cancer recurrences were detected within two years of primary treatment. Therefore, if there is evidence of recurrence on the follow-up image, we have to be more conscious of diagnosing a recurrence for the first two to three years after surgery. Because AP-CT or PET scan cannot confirm tumor recurrence, oncologists should perform surgery for pathologic confirmation to avoid false diagnosis.

Considering that anti-adhesive agents can cause inflammatory changes, imaging artifacts have a great significance for the reduction of unessential surgery. Also, careful deliberation should be given to suspend using polylactic acid in operations to remove malignant tumors, owing to the possibility of confounding the images for assessing recurrence.

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