



Research Letter

Omental actinomycosis misdiagnosed as ovarian cancer peritonei

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Dear Editor,

With reference to the report by Kim et al [1], we also experienced a rare case of omental actinomycosis. Kim et al [1] reported pelvic actinomycosis with abundant ascites comparable to cancer. Our case provides an educational tip for the gynecologist who has to manage pelvic actinomycosis misdiagnosed as ovarian cancer.

A 49-year-old woman was transferred from a local clinic with a working diagnosis of right ovarian cancer and multiple myomas. The patient was para 5-2-2-3 and the family history was noncontributory. She was postmenopausal. She had not taken a gynecological examination for almost 5 years. The pelvic examination revealed a huge uterus, an intrauterine device (IUD) that had been inserted for 10 years, and motion tenderness of the cervix. The physical examination revealed mild diffuse abdominal tenderness. We removed the IUD during the pelvic examination. The following laboratory results were reported: white blood count $15.1 \times 10^3/\mu\text{L}$; hemoglobin/hematocrit 11.9 g/dL/33.9%; platelets $637 \times 10^3/\mu\text{L}$; prothrombin time international normalized ratio 1.10; activated partial thromboplastin time 28.2 seconds; carcinoembryonic antigen 2.2 ng/mL; and CA125 84.8 U/mL. Computed tomography (CT) revealed what appeared to be right ovary cancer with a secondarily perforated appendix or a ruptured malignant mucinous neoplasm of the appendix and multiple uterine myomas (Figures 1A and 1B).

Ultrasonography revealed multiple uterine myomas. An exploratory laparotomy revealed multiple abscesses in the omentum and a periappendiceal abscess involving the cecum and terminal ileum. At surgery, no tumor-like mass was seen in the omentum, ovary, or any pelvic organ. There were multiple omental abscesses.

We performed a total abdominal hysterectomy, left and right salpingectomy, ileocecectomy, omentectomy, and adhesiolysis. The pathology revealed an acutely gangrenous appendicitis with periappendiceal abscess formation, serosal acute suppurative inflammation, and abscesses in the ileum and cecum. There was eosinophilic material with nonspecific findings of acute and chronic inflammation, abscess formation, and fibrosis, suggestive of actinomycosis in the omentum. Before pathologic confirmation of the diagnosis, we administered cefotetan for 3 days. After pathological confirmation, we treated the patient with intravenous penicillin (20 million IU/d) for 4 weeks and then oral penicillin (2 g/d) for 3 months. At the 1-year follow-up, there were no complications.

Actinomycosis is a chronic granulomatous disease caused by anaerobic organisms [1]. Almost 30 different species have been reported. Actinomycosis can develop in the cervix, thorax, and abdominopelvic organs [2]. The uterine cervix is the most prevalent site. Pelvic actinomycosis can induce endometritis, salpingo-oophoritis, and tubo-ovarian abscesses. The most common sites of primary bowel involvement are the transverse colon and appendix [3]. In a series of 10 patients, seven patients had solid masses with focal low-attenuation sites on CT. These findings reflect the pathological findings of central suppurative necrosis with granulation; however, these findings are not seen in every case [4]. Radiological techniques are usually inadequate for diagnosing abdominal actinomycosis. CT-guided aspiration or an ultrasonographic biopsy can be used to confirm the diagnosis [5]. Bacterial cultures usually do not confirm the diagnosis, and microscopic examination of a specimen is required [2]. The diagnosis is very difficult because there are no typical clinical symptoms or radiological findings, as in our case. Actinomycosis occurs in middle-aged adults [2]. Patients with an IUD or immunocompromised patients are at risk of actinomycosis. Actinomycosis can be confused with appendicitis or bowel perforation, as in our case [3]. Intestinal actinomycosis involves the cecum, appendix, and terminal ileum in 65% of the cases [3]. High-dose penicillin is the main treatment for patients who are not allergic to penicillin. If there is resistance or allergy to the first drug, second-line treatments include tetracycline, erythromycin, doxycycline, clindamycin, and a beta lactam antibiotic combined with beta lactamase [5]. Most cases require both surgery and antibiotic treatment [2]. Actinomycosis should be considered in middle-aged women with an IUD.

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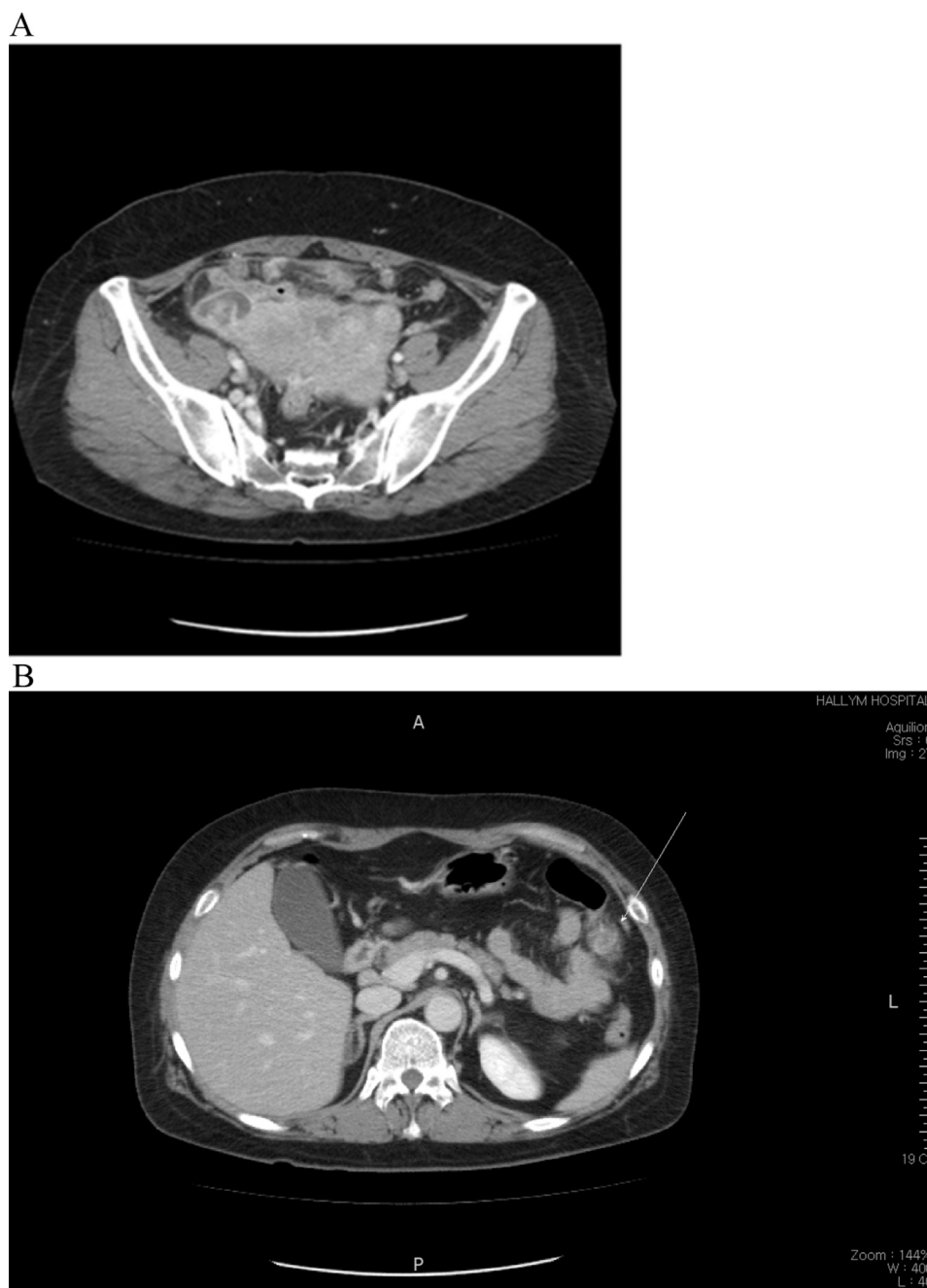


Figure 1. Computed tomography of the abdomen with contrast enhancement shows that (A) the uterus is enlarged with multiple myomas and the cecum has edematous wall thickening, fluid collection, and severe fat infiltration; and (B) the arrow shows the location of the omental actinomycosis.

Our patient had had an IUD for > 10 years, and had not had a gynecological examination for almost 5 years. We recommend that middle-aged patients with an IUD have regular gynecological follow-ups. We report a case of omental actinomycosis misdiagnosed as ovarian cancer peritonei in radiologic findings.

Conflicts of interest

The authors have no conflicts of interest relevant to this article.

Acknowledgments

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