

# A Rare Tumor Resembling Ovarian Cysts: Mucocele of the Appendix

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**Abstract:** Objective: To show unusual presentation of a rare disease that may lead to a diagnosis mistake.

**Case report:** A 46-year-old postmenopausal woman went to her family physician due to a six-month abdominal pain on her right iliac-fossa. Her physical exam was normal, but a pelvic transabdominal ultrasonography showed a 12-cm left ovarian-cyst. Therefore, their doctor sent her to gynecology service, where the work-up indicated a benign cyst. Thus, they scheduled an oophorectomy. During surgery, through a Pfannenstiel incision, uterus and ovaries were normal, but the "cyst" was a tumor of the appendix, so their gynecologists consulted to surgical oncology. The tumor (12-cm) was gray, firm, with smooth surface, and completely adherent to cecum. We diagnosed a tumor of the appendix and carried-out a different surgical incision and a right hemicolectomy. She had an uneventful postoperative course, and the pathologist diagnosed a mucocele of the appendix.

**Conclusion:** The mucocele of the appendix may be confused with ovarian cysts on ultrasonography.

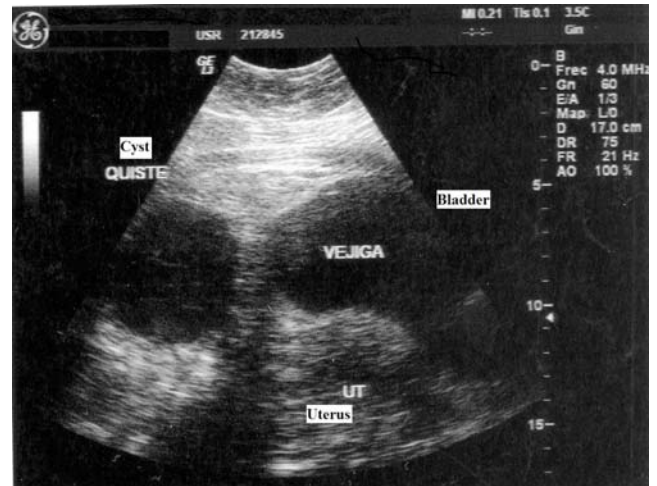
**Keywords:** Diagnosis/Differential, Female, Humans, Middle Aged, Mucocele/diagnosis, Ovarian Cysts/diagnosis.

## BACKGROUND

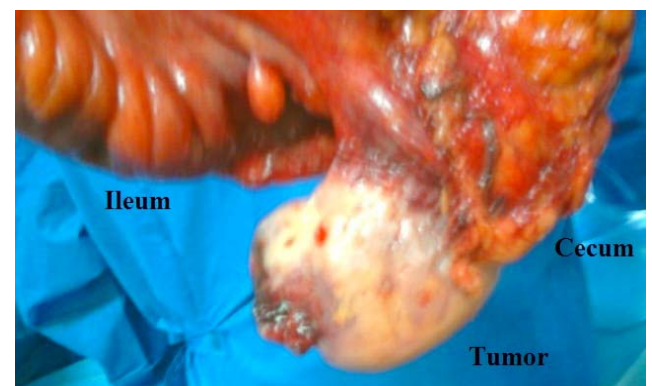
Ovarian cysts are common [1]; its treatment, rest on women's age, symptoms, ultrasonography (USG) features, tumor markers, and cyst's size [2]. In postmenopausal women usually when this lesion exceeds 10-cm surgery is necessary [2, 3]. However, sometimes rare diseases may mimic ovarian cyst that leads to a diagnosis mistake.

## CASE REPORT

A 46-year-old postmenopausal woman went to her family physician due to six-month intermittent abdominal pain in her right iliac-fossa. The symptom worsened and limited her daily activities, but she denies other warning signs. Her doctor found her normal on a complete physical exam. He suggested a pelvic transabdominal USG that reported a left 12-cm ovarian-cyst, (see Figure 1). Hence, their doctor sent her to our general hospital gynecology service. In that service, all work-up (physical exam, tumor markers [CA-125 and carcinoembryonic antigen], and basic laboratories) indicated a benign cyst, and gynecologists scheduled an oophorectomy. During surgery, through a Pfannenstiel incision, uterus and ovaries were normal, but the "cyst" was a 12-cm tumor of the appendix, so



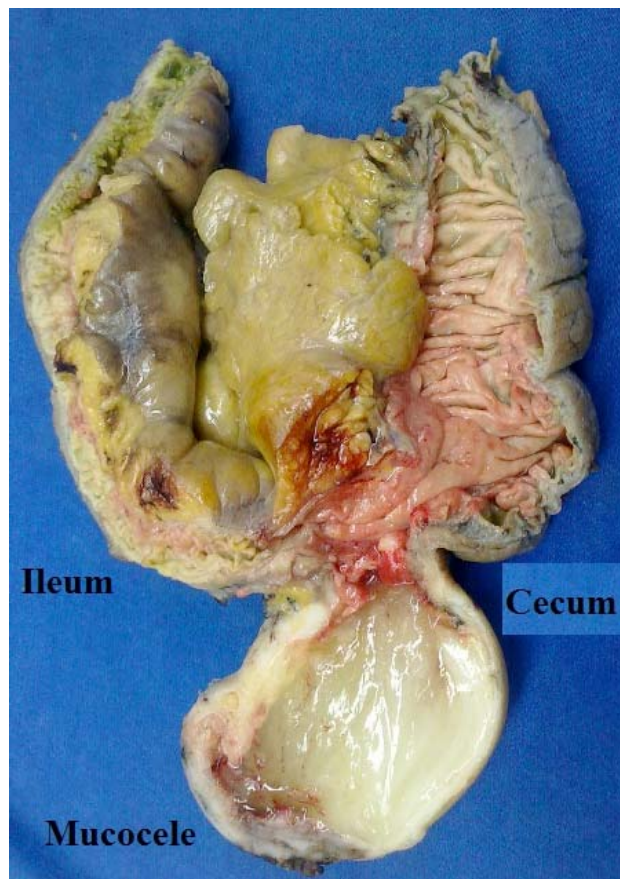
**Figure 1:** Transabdominal USG image shows the uterus, bladder, and cyst. The cyst looks like oval, anechoic and located above uterus and urinary bladder.



**Figure 2:** Photograph of the gross surgical specimen shows the cecum, tumor, and terminal ileum.

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her gynecologist consulted during trans-operative to surgical oncology. We found that the tumor was gray, firm, and with soft surface, but fixed to cecum on a 12-cm area, (see Figure 2), so we diagnosed a tumor of the appendix, probably a cystadenoma, cystadenocarcinoma or carcinoid. Due to tumor features, an ample exposure was necessary for a right hemicolectomy; hence, we decided to carried-out a mild-line incision. Her postoperative course was uneventful. Finally, the pathology department diagnosed a mucocele of the appendix, (see Figure 3).



**Figure 3:** Photograph of the cut gross specimen shows the cecum, the mucocele, and terminal ileum.

## DISCUSSION

Colorectal neoplasms are the most frequent entities that mimic gynecological tumors noticed during surgery [4, 5]. Mucocele of the appendix is a term that means a dilated appendiceal lumen produced by abnormal accumulation of mucus. It is a rare disease with a reported prevalence of 0.2-0.3% in appendectomy specimens [6].

Mucocele may be confused with ovarian cysts on USG. Although there are radiologic signs to try identifying appendicular mucocele [7], some reports

show how this study, transabdominal or transvaginal, can confuse both entities [8-10]. Therefore, the diagnosis mistake is recognized only during surgery.

Rarely, correct preoperative diagnosis of mucocele of the appendix occurs after the clinical exam. The only way of precise diagnosis of mucocele is on histopathology. Hence appendectomy is the treatment of choice for tumors of the appendix [11]. Nevertheless, when they affect the appendix base or the cecum, a hemicolectomy is mandatory [11]. All these surgeries are critical for correct tumor management and to prevent its rupture. If the surgeon disrupts mucocele this leads to a serious, even lethal, complication: the pseudomyxoma peritonei [6].

Finally, surgeons working at the pelvis require plenty of surgical abilities to attend several diseases [4]. However, if the surgeon lacks skills for a specific procedure, must look for qualified personnel [4].

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