Mucinous Cyst adenoma of Appendix Mimicking An Ovarian Cyst: A Case Report

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ABSTRACT

Mucinous cyst adenoma of the appendix is a rare important disease which may be misdiagnosed as an ovarian cyst. We report a case presented to Alzahra teaching hospital with lower abdominal pain. Clinical exam and ultrasonography suggested an ovarian cyst or hydrosalpinx. The diagnosis was made at the time of laparotomy and mucocele removed. In women with cylindrical cystic mass in right iliac fossa, an appendiceal mucocele should be considered in the differential diagnosis.

Key words: Appendix, Mucocele, Mucinous cyst adenoma, Ovarian Cyst.

Introduction

An ovarian cyst is a sac filled with liquid or semi-liquid material arising in an ovary. The number of diagnoses of ovarian cysts has increased with the widespread implementation of regular physical examinations and ultrasound technology. The finding of an ovarian cyst causes considerable anxiety for women because of the fear of malignancy, but the vast majority of ovarian cysts are benign [8]. However, ovarian cysts can herald an underlying malignant process or, possibly, distract the emergency clinician from a more dangerous condition, such as ectopic pregnancy, ovarian torsion, or appendicitis. When ovarian cysts are large, persistent, or painful, surgery may be required, sometimes resulting in removal of the ovary. With the more frequent use of ultrasonography in recent years, the diagnosis of ovarian cysts has become more common [3]. Mucinous cyst adenoma is the most common form of benign neoplasms of the appendix, with an incidence of 0.6% in appendectomies [15]. It is difficult to make preoperative diagnosis on imaging studies and usually it is discovered incidentally during surgery [8]. The aim our study was report the mucinous cyst adenoma of appendix in a postmenopausal woman.

Case report:

A 54-year-old woman patient presented with lower abdominal pain to AL Zahra- Hospital of Tabriz University of Medical sciences in September 2009. The pain was intermittent and was exaggerated with eating but not traveling to anywhere and not associated with other symptoms. She was multiparous and menopause from 10 years ago. She did not have any past medical problem and underwent tubal ligation 25 years ago.

In physical examination vital signs were stable. There was no tenderness in deep palpation of abdomen. In vagino-abdominal exam uterus size was normal and a mass detected in right adnexa. Transvaginal and abdominal ultrasonography revealed atrophic uterus with 4.5 mm endometrial thickness and 80×42 mm cystic mass with fine internal septation and echoes in right adnexa. Regarding the tubular appearance of cyst the first possible diagnosis was hydrosalpinx and then ovarian cyst. All laboratory tests and tumor markers were in normal limit but CEA=5.3 ng/ml was higher.
than normal. The patient was operated with probable diagnosis of ovarian cyst. Both adnexa were normal and there was a 4×6 cm cystic mass originated from appendix (fig 1). Intra abdominal exploration showed no ascitis and metastasis. Appendectomy was performed. Frozen section confirmed the diagnosis of mucocele, so we decided to do hysterectomy and bisalpyngo-oophorectomy (TAH+BSO) too.

The final histology revealed mucinous cyst adenoma of the appendix (fig 2).

**Fig. 1:** Mucocele of appendix.

**Fig. 2:** Pathologic slides of Mucinous cystadenoma of appendix.

**Results and Discussion**

Appendiceal mucocele is a mucinous distension of the appendiceal lumen which caused by retention of mucin, mucosal hyperplasia, cyst adenoma or cystadeno carcinoma. It may be presented with palpable abdominal mass, lower right abdominal pain, gastrointestinal bleeding or nonspecific signs including weight loss, nausea/vomiting, changes in bowel habits, hematuria, unexplained anemia and acute appendicitis [8,3,5,6,7,12]. However, most of mucoceles are asymptomatic and are found incidentally by imaging studies or during surgery for ovarian masses [8,9,4]. The diagnostic studies such as ultrasonography, computerized tomography, magnetic resonance imaging and colonoscopy are valuable [8,10,2]. Concentric, echogenic layers within a cystic mass (onion skin pattern), dumbbell-shaped an echogenic cystic structure or a cyst with wall clacification in right iliac fossa is reported on ultrasonography. Sometimes appendiceal mucocele mimics an adnexal cystic mass and the patient undergoes operation with this diagnosis as in our case [13,1,11,14]. Therefore, an appendiceal mucocele (AM) should be considered in the differential diagnosis of a right-sided pelvic mass. Surgical resection of mucocele without spillage of its content is appropriate management of AM [8,7,2]. Appendectomy alone or combined with TAH+BSO via laparotomy is recommended in benign neoplasms of appendix in an elder female [8]. Treatment for malignant mucoceles requires a right hemi colectomy [12]. To avoid pseudo myxoma peritonea, the mucocele should be removed intact [3,12,2]. The patient must be followed up due to association with neoplasms in other locations and the later risk of pseudo myxoma peritonea [3].

**Conclusion:**

Appendiceal mucocele should be considered in differential diagnosis of right adnexal masses with tubular structures. The least surgery is appendectomy and the abdomen should be looked for concomitant tumors and the patient followed up for a long time.

**Authors' contributions:**

E. Ouladsahebmadarek carried out the design and coordinated the study and prepared the manuscript. A. Dastranj-Tabrizi provides assistance in the design of the study, coordinated and carried out all the pathologic assessments and participated in manuscript preparation. Kh. Pouya provided assistance for all steps of surgery, patient care and preparing the manuscript. A. Khaki assisted in
writing the article. All authors have read and approved the content of the manuscript.

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