

Four Giant Mucocoeles Of The Appendix Vermiformis

G Sakman, C Parsak, T Akcam, O Alabaz

Citation

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Abstract

A mucocoele is the dilatation of appendix lumen resulting from hyper secretion and musin accumulation. Mucocoeles of the appendix are difficult to diagnose despite extensive preoperative evaluation. Patients are often asymptomatic or can be confused with other lesions and lesions are usually discovered incidentally during operation. Simple appendicectomy is curative in uncomplicated benign lesions. The aim of this study is to report and discuss four cases with mucocoeles.

INTRODUCTION

Mucocoele is a term indicates the dilatation of appendix lumen due to hyper secretion and musin accumulation. Appendiceal mucocoele is a very rare clinical condition, encountered in only %0.1-0.3 of all appendectomy specimens with a female predominance and average age at the time of diagnosis over 50 years [1]. Preoperative diagnosis of mucocoeles are very difficult, therefore the diagnosis is often incidental event.

Musin accumulates slowly and if infection doesn't occur, appendix lumen dilatation is developed; then cystic mass is occurred. Cystic dilatation is occurred due to obstruction or adhesions secondary to appendicitis.

Currently mucocoeles of appendix can be divided into three categories:

1. Retention mucocoele with normal/ hyper plastic appendiceal mucosa.
2. Mucinous cyst adenoma with neoplastic epithelium similar to that seen in villous adenomas and adenomatous polyps.
3. Mucinous cystadenocarcinoma with neoplastic epithelium similar to that seen adenocarcinoma of colon [2]

The aim of this study to report and discuss four cases with mucocoele. In four cases appendiceal mucocoele was an incidental finding in the operation for acute appendicitis, renal cell carcinoma and adnexial mass respectively.

CASE 1

A fifty-five- year-old female patient presented with complaints of acute right lower quadrant pain, nausea and vomiting. Physical examination revealed mild tenderness, right lower quadrant pain upon palpation, muscular rigidity and rebound tenderness. White blood cell count was 14000 and other laboratory values were normally. An emergency operation was performed for acute appendicitis, but an enflame mobile cystic mass with 10x8 cm in its great dimension was observed in right iliac fossa and during the operation a diagnosis of a mucocoele of appendix was made (Fig 1).

Figure 1

Figure Legend 1: Macroscopic view of mucocoele at the operation- gross specimen.



Surgical treatment included only appendectomy. Histopathological analysis demonstrated a mucinous

cystadenoma.

CASE 2

A fifty-seven-year-old female patient presented with right lumbar pain and hematuria. Physical examination and biochemical values were normally. Abdominal ultrasonography and computed tomography scans demonstrated a renal mass that reaches to right iliac fossa. An operation was performed electively. A renal mass and a cystic lesion were observed different from renal solid mass. A diagnosis of incidental mucocoele of appendix for this cystic lesion was established. A frozen section examination was performed for cystic lesion. Right nephrectomy was performed and after the frozen section analysis demonstrated a benign lesion, appendectomy was performed additionally. The histopathological analysis demonstrated a renal cell carcinoma and a mucinous cyst adenoma.

CASE 3

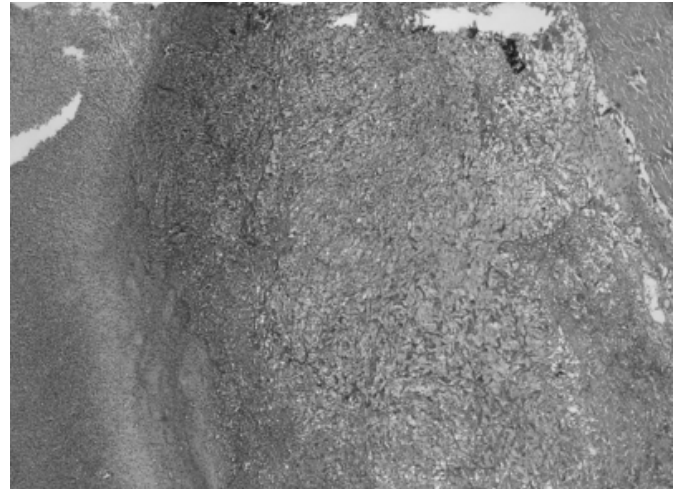
A fifty four years old female patient had a complaint of lumbar and right lower quadrant pain for two years. Physical examination and biochemical values were normally. She admitted to our gynecological outpatient clinic. After ultrasonography and tomography an adnexial mass was demonstrated. An operation was performed for this diagnosis electively. A giant mucocoele was discovered at right iliac fossa. Appendectomy and frozen section examination were performed. Histopathological examination demonstrated a mucinous cystadenoma.

CASE 4

A forty two years old male patient had a complaint of right lower quadrant pain for three hours. Physical examination revealed mild tenderness, muscular rigidity and rebound tenderness. White blood cell count was 16500 and other laboratory values were normally. An emergency operation was performed for acute appendicitis, but an inflamed cystic mass with 5x5 cm in its great dimension was observed in right iliac fossa and during the operation a diagnosis of a mucocoele of appendix was made. Surgical treatment included only appendectomy and frozen section examination were performed. Histopathological analysis demonstrated a mucinous cystadenoma (Fig. 2)

Figure 2

Figure Legend 2: Histopathological view of mucocoele (HE x 100)



DISCUSSION

Mucocoele of appendix vermiformis is a very rare clinical condition. Between January 1995 and December 2004 three mucocoele (0.6%) were encountered in five hundred appendectomy specimen of our general surgery department. 25% of giant mucocoeles can be asymptomatic and most a correct preoperative diagnosis of appendiceal mucocoele is difficult and can be confused, therefore most of the mucocoeles are seen incidentally [3, 4, 5]. Our second case was an incidental finding with renal cell carcinoma and third case was confused with adnexial mass. The most symptom of this condition is right lower quadrant pain (64%). Our first, third, and fourth cases were presented with complaint of acute right lower quadrant pain [5, 6, 9].

Abdominal ultrasound (US), Computed Tomography (CT) scan of the abdomen may suggest the diagnosis. The onion skin sign in US is accepted a specific marker of appendiceal mucocoele. The CT finding was a well-encapsulated cystic mass with a variable thickness. Also, US and CT are useful methods in differentiating this lesion from mimicking conditions [7, 8]. However, in our second, third, and fourth case we could not diagnose the mucocoele with US and CT before the operation due to the rarity of lesion and inexperience of radiological clinic for this lesion.

Different surgical strategies are planned due to pathogenesis and histological characteristics of the lesions. A frozen section examination should be performed in all operations, because it may be impossible to predict underlying pathology by inspecting and palpating. If a benign lesion is demonstrated, appendectomy should be curative. If a malign

lesion of appendix is found, more extensive procedure is necessary [4, 5, 6, 9,10].

Mucocele of appendix are difficult to diagnose despite extensive preoperative evaluation. Patients are often asymptomatic and lesions are usually discovered incidentally during operation. A frozen section examination should be performed in all operations. Simple appendicectomy is curative in uncomplicated benign lesions.

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Author Information

Gurhan Sakman

Assistant Professor, Department of General Surgery, Cukurova University Medical Faculty

Cem Kaan Parsak

Assistant Professor, Department of General Surgery, Cukurova University Medical Faculty

Tolga Akcam

Department of General Surgery, Cukurova University Medical Faculty

Omer Alabaz

Professor, Department of General Surgery, Cukurova University Medical Faculty