INTUSSUSCEPTION DUE TO APPENDICEAL MUCOCELE - A RARE CASE REPORT

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ABSTRACT

Intestinal intussusception caused by mucocele of the appendix is extremely rare. Only few cases have been documented in the literature and most of them were in females. We report a case of 23 year-old male patient who presented with five weeks history of intermittent right lower abdominal pain and two days history of vomiting and bloody diarrhea. Abdominal CT showed appendiceal mass with intussusception, which was confirmed as an appendiceal mucocele with ileocecal intussusception at laparotomy. Histopathological examination revealed mucocele due to mucinous cystadenoma of appendix.

KEY WORDS

Appendiceal mucocele, intussusception

1. INTRODUCTION

Intestinal intussusception is rare in adults and is usually associated with pathological origins. Appendiceal mucocele is a rare disease which causes a distension of the appendix due to accumulation of the mucus and is more predominant in females. Intussusception caused by mucocele of the appendix is extremely rare accounting for only 0.25% of patients undergoing appendicectomy.\(^{[1]}\) We report a young male patient presenting with right lower abdominal pain, vomiting and bloody diarrhea. Abdominal CT showed an appendiceal mass with intussusception, which was confirmed as an appendiceal mucocele with ileocecal intussusception in laparotomy and was further confirmed by histopathological examination.

2. CASE REPORT

A 23 year-old male patient presented with intermittent right lower abdominal pain for 5 weeks. Symptoms of bloody diarrhea and vomiting occurred since two days. He was apyrexial on admission, had moderate epigastric tenderness, but no rebound tenderness. No abdominal masses were palpable and had normal bowel sounds. Plain X-ray of abdomen showed no mass and normal gas patterns. Abdominal CT revealed swelling of the appendix (15mm) with intussusception. Laparotomy revealed ileocecal intussusception caused by an appendiceal mucocele. The specimen was sent to laboratory for histopathological examination. Grossly the specimen showed appendiceal mass measuring 4cm in diameter (Figure.1) which on cut section revealed thick mucin (Figure.2). Microscopic examination of the appendiceal wall revealed mucinous epithelium with basally placed nuclei and supranuclear mucinous vacuole (Figure.3) and diagnosis of mucocele of appendix due to mucinous cystadenoma was made.

3. DISCUSSION

Appendiceal mucocele is a rare disease which causes a distension of the appendix due to abnormal mucus accumulation. It has been histologically divided into four subtypes depending upon the cause of mucocele which
Fig: 1 Mucocele of appendix protruding into the cecum

Fig: 2 Cut section of the appendiceal mass showing thick mucin

Fig: 3 Section showing mucinous epithelium with basally placed nuclei and supranuclear mucinous vacuole
can be due to mucinous cystadenoma, mucosal hyperplasia, mucinous cystadenocarcinomas and retention cyst with relative frequencies of 32%, 20%, 10% and 18% respectively. Patients with appendiceal mucocele are commonly diagnosed using a sonogram by accident, since one quarter of patients have no symptoms prior to diagnosis. Clinical evidences from other studies have demonstrated that about 20% to 50% of appendiceal mucocele patients presented with features of acute appendicitis.

In our case, the patient is 23 year-old-male patient which is unusual. Appendiceal mucocele was predominantly diagnosed in female patients with a female to male ratio of 3:1. Also the average age at the diagnosis is 54 years old for benign mucoceles and 64 years old for malignant ones. Appendiceal mucocele with intussusception in a young male is a rare clinical presentation. The patient had right lower abdominal pain which was mistaken initially as appendicitis. However, the medical history of bloody diarrhea suggested the possibility of intussusception. The most common symptom of Appendiceal mucocele is a right lower quadrant abdominal pain (64%), and about 25% of patients are asymptomatic at the diagnosis. Other symptoms include an intestinal intussusception, torsion, urethral obstruction, and hematuria.

Modalities which help in the diagnosis of Appendiceal mucocele include abdominal sonogram, barium enema, colonoscopy and computed tomography. An appendiceal threshold diameter of 15mm in a sonogram is the optimal threshold for the diagnosis of Appendiceal mucocele, with a sensitivity of 83% and a specificity of 92%. An outer diameter threshold of 6mm has been established for an acute appendicitis diagnosis. On a computerized tomography, the presence of curvilinear or punctuate wall calcifications in a right lower quadrant cystic lesion strongly suggests a diagnosis of the mucocele of the appendix.

Appendicectomy is the treatment of choice. Non-surgical management is not recommended because apparently benign lesions can progress to mucinous cystadenocarcinoma, and the rupture of mucocele may lead to pseudomyxoma peritonei. To prevent the rupture of mucocele and to evaluate the presence of mucoid fluid accumulations, an open laparotomy is preferred to a laparoscopy when appendiceal mucocele is suspected. A simple appendicectomy is reliable with uncomplicated and unreptured mucoceles. In mucinous cystadenocarcinoma and mucocele with invasion to the cecum or ileum, a right hemicolectomy may be needed. If a ruptured appendiceal mucocele is suspected, the primary resection should be accompanied by the removal of all gross implants. Follow-up is required because recurrences as pseudomyxoma peritonei and metachronic colonic neoplasms can occur.

Patients with simple mucocele, mucosal hyperplasia and mucinous cystadenoma have shown an excellent prognosis with 5-year survival rates of 91-100%. A rupture of Appendiceal mucocele resulting in peritoneal contamination with development of pseudomyxoma peritonei has 5-year survival rate of 53% to 75%. However, the 5-year survival rate is markedly decreased to 25% in malignant mucoceles due to complications of pseudomyxoma peritonei.

4. CONCLUSION

An accurate pre-operative diagnosis is essential for proper treatment and to prevent
the complications of rupture during surgery. Attention should be paid when approaching patient with right lower abdominal pain and unusual presentations like Appendiceal mucocele should be kept in mind.

5. REFERENCES


