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Mucoceleof Appendix: A Case Report and Review Literature

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Abstract: Mucocele of the appendix is an aseptic dilatation of the lumen of appendix secondary to obstruction. It is a rare disease and is seen in 0.2% and 0.7% of all excised appendixes.Mucocele of appendix may remain asymptomatic and found incidentally or a patient may present with right lower quadrant abdominal pain, abdominal mass, weight loss, and change in bowel habits. Correct pre operative diagnosis is important to select an appropriate surgery and to prevent post operative complications. We present a case of a 35 year old female who came to the surgery OPD with right sided abdominal pain since 5 days; patient had tenderness in right iliac fossa with a palpable lump. A mucocele of appendix was diagnosed pre operatively by CT scan and patient was planned for an open surgery. Appendectomy was performed and base of appendix was normal with no enlarged surrounding lymph nodes. Histopathological examination of specimen showed mucocele of appendix secondary to cystadenoma.
Keywords: Appendix, Mucocele, Cystadenoma

INTRODUCTION

Mucocele of the appendix is a progressive dilatation of the appendix from the intraluminal accumulation of the mucoid substance [1]. It is a rare disease and is seen in 0.2% and 0.7% of all excised appendixes [2]. The accumulation of mucoid material may result from various pathological conditions which may be benign or malignant. There are 4 histopathological types of appendicealmucocele: mucinous cystadenoma, mucosal hyperplasia, mucinous cystadenocarcinoma and a retention cyst [3, 4]. Though most of the time a simple resection of lesion (appendectomy) is curative however if not treated properly may complicate by a possible rupture of the mucocoele, either spontaneous or accidental, during surgery which may result in the clinical condition of pseudomyxomaperitonei, a spread of malignant cells throughout the entire peritoneal cavity in the form of multiple mucinous deposits and has a high mortality.

CASE REPORT

A 35 year old female came to the surgery OPD with the complaint of pain in right side of abdomen since 5 days. There was no history of fever, nausea, vomiting or altered bowel habits. On examination her abdomen was soft and not distended. There was tenderness in RIF and a vague mass with a smooth surface was felt. An ultrasound scan showed a right sided mixed echogenic pelvic mass but its origin could not be located; the diagnosis of mucocele of appendix was made by CT scan which showed a distended tube arising from ceacal wall (Fig. 1). Her haemogram, biochemistry profile and urine analysis were normal. An exploratory laparotomy was done and to our surprise a large mucocele of appendix measuring 10cm. x 4cm was found. On a careful examination there was no discharge from the mucocele into peritonium, the base of appendix was normal and no enlarged lymph nodes so an appendicectomy was done with wide excision of base from ceacum (Fig. 2). The histopathological examination of appendix showed a mucocele of appendix secondary to mucinous cystadenoma(Fig. 3). Her post operative stay in hospital remained uneventful and was discharged on third day.

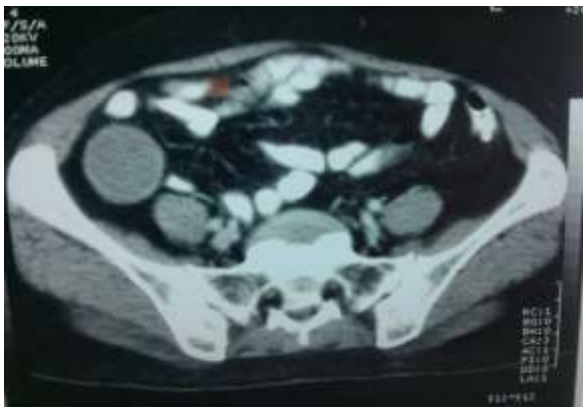

Fig. 1: CECT abdomen showing an oval hypodense lesion on axial sections

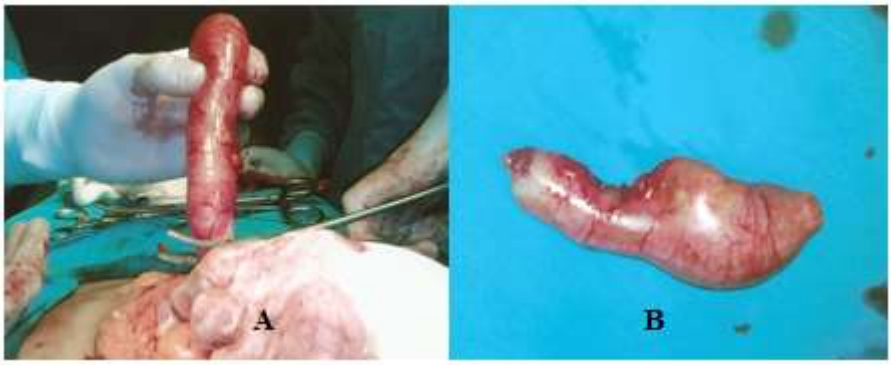

Fig. 2 (A, B): Showing mucocele of appendix

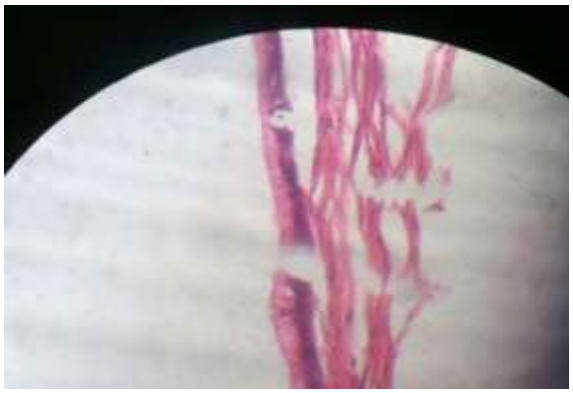

Fig. 3: showed lining of columnar mucus epithelium and focal areas of pseudo stratification

DISCUSSION

Mucocele of appendix was first described by Rokitansky in 1841. It is a rare disease and is seen in 0.2% and 0.7% of all excised appendixes [5].

The mucocele of appendix refers to a localised or diffused globular enlargement of vermiform appendix by a large amount of mucus. This mucus comes from the goblet cells which are found in abundance in appendiceal epithelium. The cause of mucinous accumulation ranges from hyperplastic to malignant processes. There are four histological types: retention cyst, mucosal hyperplasia, mucinous cyst adenoma and mucinous cystadenocarcinoma. Besides there are few instances in which this gross appearance is the result of occlusion of the lumen by carcinoid tumour, endometriosis or some other processes [6, 7].

In most of the patients (>50%) it remain asymptomatic and is diagnosed accidentally during the radiologic and endoscopic examinations or during the surgery. The most common presenting symptoms include right lower quadrant abdominal pain (27%), abdominal mass (16%), weight loss (%10) and change in bowel habits (5%). The complications of disease include perforation, peritonitis, intussusception, and bleeding and psuedomyxomaperitonei [8,9].

Pre operative diagnosis is important to select an appropriate surgery and to prevent post operative complications and repeated surgery. USG stays as first line investigation for all patients with abdominal symptoms; in mucocele of appendix it may show a purely cystic lesion with anechoicfluid, hypo echoic masses with fine internal echoes or complex hyper echoic masses. The degree of internal echogenicity is related to the number of acoustic interfaces provided by the mucin. The primary sonographic differentiation from uncomplicated acute appendicitis is the lack of appendiceal wall thickening of more than 6mm. CT scan is the most accurate diagnostic tool. In a mucocele of appendix it will show a lumen of more than 1.3 cm, with cystic dilation and wall calcification. In our patient the diagnosis was confirmed by CT scan which showed a low-attenuation, well-encapsulated mass with smooth regular walls arising from ceacum .Adjacent bowel was displaced by the mass, but no periappendiceal inflammation or abscess was seen. On a colonoscopy examination one can see an elevation of the appendiceal orifice with a yellowish mucinous discharge visible from this orifice.

Historically Barium study was performed which showed a “vortical fold” pattern which represents a concentric ring appearance of the ceacal mucosal folds directed toward the obstructed appendiceal orifice [10].

Surgery is the treatment of choice for the mucocele of appendix.The principle for a successful

surgery is to avoid the rupture of the mucocele, either spontaneous or accidental, during surgery as an intact mucocele does not pose a threat to the patient however if ruptured it may result in the clinical condition of pseudomyxomaperitonei which is characterized by implants of mucinous epithelium on the peritoneal surfaces and mucus accumulation within the peritoneal cavity and has unsatisfactory long term results. Therefore the selection of adequate surgical method is very important. The laparoscopic surgeries have been successfully performed in Mucocele of appendix however an open surgery may be preferred as it not only reduced the chances of mucus spillage from the mucocelebut also provides a n option of palpating the regions where mucinous tumours are most common [11, 12].

Depending upon the type of lesion the surgery for the mucocele of appendix may range from a simple appendicectomy to right hemicolectomy with intra peritoneal chemotherapy. In our patient the mucocele was not perforated, the base of appendix appeared normal and there were no enlarged lymph nodes in mesoappendix and ileocolic region so appendicectomy was done with wide excision of base from ceacum [13].

CONCLUSION

Mucocele of appendix is a rare disease. It can mimic an appendicular lump or a pelvic mass. CT scan is the best tool to clear the diagnostic dilemma. Preoperative diagnosis is essential to select the appropriate surgery and to prevent post operative complication.

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