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Case Report

Rare cases of appendicitis presented in KIMS Amalapuram, India: a clinical study

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ABSTRACT

RIF pain is a hall mark of acute appendicitis until proven otherwise decision making in a case of acute appendicitis may be difficult for junior surgeons hence we aimed at analysis in RIF pain. Out of 120 cases we found 3 rare entities they are PMP, CT of appendix and perforated appendix in LIF. Pseudomyxomaperinei and carcinoid tumour are rare presentations. Despite the current standard of treatment modalities as extensive surgical resection combined with chemotherapy, PMP and CT frequently recurs with treatment options being limited at recurrence and with severe impact on quality of life. Perforated appendix in LIF is also a rare presentation which needs appendicectomy, perforation closer with omental patch.

Keywords: CT carcinoid tumour, PMP Pseudomyxomaperinei

INTRODUCTION

Appendic is also known as vermiform appendix.[1] The vermiform appendix is considered by most to be a vestigial organ, its importance in surgery due only to its propensity for inflammation that results in the clinical condition known as acute appendicitis .Acute appendicitis is a common cause of abdominal pain for which a prompt diagnosis is rewarded by a marked decrease in morbidity and mortality.[2] Routine history and physical examination both remain the most effective and practical diagnostic modalities.

Pseudomyxomaperitonnei, with an estimated incidence of 1-2 out of a million, pseudomyxomaperitonnei is also known as adenomucinosis or gelatinous ascites listed as a rare NIH office of rare diseases research (ORDR) and national organization of rare disorders (NORD).[3] As an indolent neoplasm with unspecific manifestations, PMP tends to be misdiagnosed, or discovered at advanced stages.

Carcinoid tumours (CTs) are the most common neoplasm of the appendix.[5,6] The overall incidence of carcinoid tumours has been estimated to 1 to 2 cases per 1000 appendectomies in surgical specimens.[6] CTs are discovered usually during the course of another procedure. In children the tumour is usually smaller than 2 cm in diameter.[7] A carcinoid tumour of the appendix may cause pain in lower abdominal quadrant, similar to the pain of acute appendicitis. The diagnosis should be confirmed histologically.

Situs inversus totalis (SIT) is an uncommon anomaly characterized by transposition of Organs to the opposite side of the body in a mirror image of normal.[18] It occurs in 1:20,000 of the general population. Situs inversus totalis complicates diagno, sis and management of acute

abdominal pain. Acute appendicitis in these patients may present with confusing symptoms and signs because of abnormal position of appendix. About 50% of patients with left-sided appendicitis, for example, have pain on the right side.[19]

CASE REPORT

Case 1

A 55 years male presented to emergency department with pain abdomen for 1 month with increased intensity of pain and distension of abdomen for 5 days. On admission patient was stable with pulse rate: 70 beats/ min. and B.P. 140/90 mm of Hg with tenderness over the right iliac fossa and left iliac fossa with no guarding and rigidity. No history of similar attack in the past. No abnormality detected in X- supine and erect abdomen.

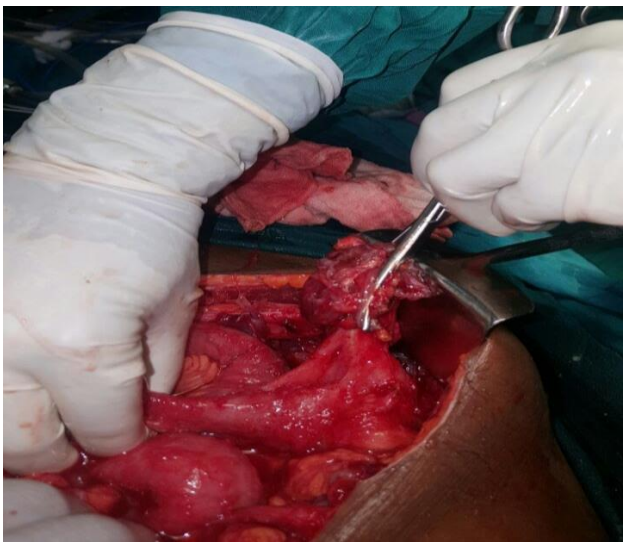

Figure 1: Appindix with tumour.

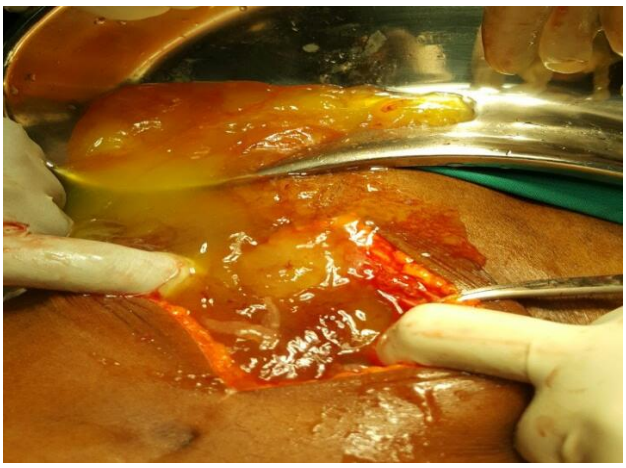

Figure 2: Mucinous ascitic fluid.

Ultrasonography showed organized collection in right and left iliac fossa and ascites. Computed tomography shows localized collection noted in right iliac fossa and left iliac fossa which is arising from appendix and ascites present. On exploratory laparotomy-peritoneal cavity was filled with thick gelatinous mucinous substance (1.5 to 2 Liters) with ruptured cyst arising from vermiform appendix at base and illeocecal junction.

Gelatinous peritoneal substance was drained and whole of the ruptured cyst along with the appendix was resected at base of appendix and Followed by thorough washing of peritoneal cavity with 2 liters of normal saline. Whole of the peritoneal cavity and gastrointestinal tract from duodenojejunal flexure to rectum inspected speimen sent for histopathology examination. Histopathology report showed low grade mucinous neoplasm of the appendix with high risk of recurrence and pseudomyxomaperitonei.

Case 2

A 50-years-old male patient presented complaining about abdominal pain, vomiting and decreased appetite the last two days. Physical examination revealed a healthy-looking male with a mildly elevated temperature 38°C, blood pressure 210/140 mmHg and pulse rate 95/min. The patient showed no signs of acute abdomen suggestive of acute appendicitis, as direct and rebound tenderness in the RLQ. Hemoglobin 15 g/dl, white blood cells 13700/mm with neutrophil prevalence 80%, platelets 223000/mm, erythrocytes sedimentation rate 55 mm/h, while the rest blood analysis was normal. Abdominal ultrasound revealed A peristaltic blind ending tubular structure noted in the right iliac fossa measuring 6.7 mm futures suggestive of acute appendicitis. The patient was operated for acute appendicitis. The appendix rapped with omentum found inflamed and multiple gangrene patches seen in small bowl. Jejunojejunostomy, Ileoileostomy and appendectomy done. The histological examination revealed a typical CT of the appendix.

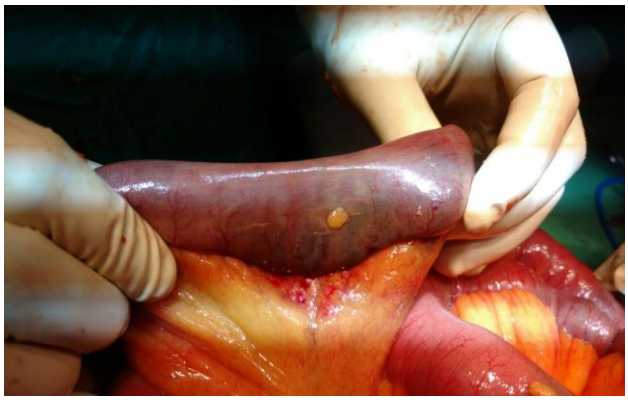

Figure 3: Gangrenous small bowel.

Case 3

A 21-years-old male patient presented complaining about abdominal pain, vomiting and nausea the last two days. Physical examination revealed a healthy-looking male

with a mildly elevated temperature 38°C, blood pressure 110/70 mmHg and pulse rate 96/min. The patient had tenderness in right iliac fossa. with positive pointing sign and maximal tenderness at McBurney's point Hemoglobin 14.2g/dl, white blood cells 11500/mm with neutrophil prevalence 80%, platelets 195000/mm, erythrocytes sedimentation rate 55 mm/h, while the rest blood analysis was normal. Abdominal ultrasound revealed dilated tubular non- compressible structure measuring 12mm in diameter noted in RIF region, moderate amount of free fluid noted in RIF features suggestive of perforated appendix.

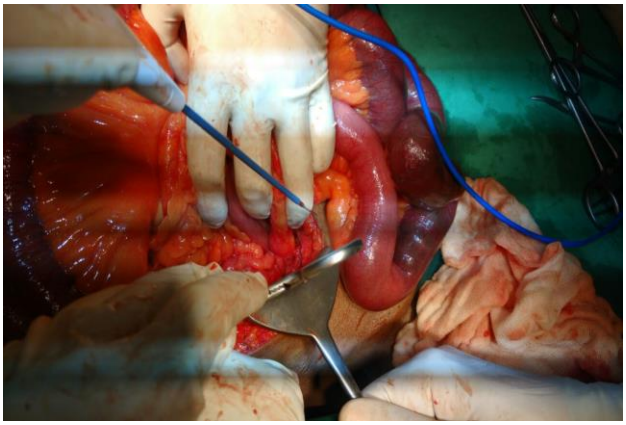

Figure 4: Multiple gangreneous patches.

Surgery was commenced with a Mcburneys incision over the right iliac fossa but this incision was abandoned when the cecum and appendix were not found in the right iliac fossa. A mid-line sub-umbilical laparotomy incision was then made and a normal looking cecum found in the left iliac fossa and the base of the appendix is perforated.

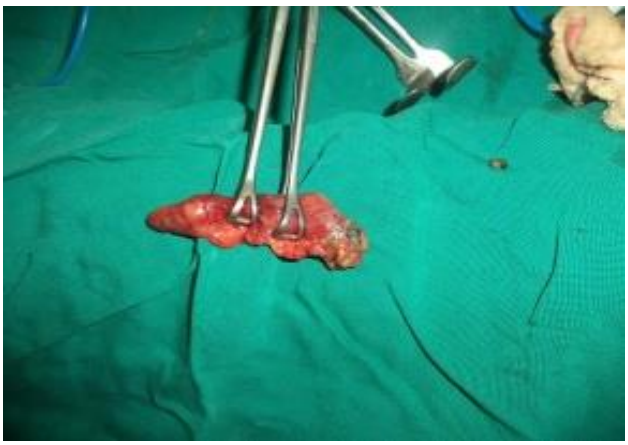

Figure 5: Perforated base of the appendix.

DISCUSSION

Pseudomyxomaperitonnei is characterized by dissemination of mucinous tumourcells on peritoneal surfaces and progressive accumulation of mucinous ascites throughout the peritoneal cavity resulting in the so called 'JELLY BELLY'. An ovarian tumor (or) an appendicealmucocoele (or) a preexcistingintraperitoneal mucinous neoplasm has been implicated as primary cause of PMP.[3,20] As follows emerging evidence supports the appendiceal origin rather than ovarian origin of the disease. Ultrasonography: shows echogenic peritoneal massesor ascites with echogenic particles. However, conclusions cannot be drawn from ultra-sonography alone since the mucenous ascitis resembles free peritoneal fluid.[10]

Computed tomography shows higher densities of collections (mucinous ascites) compared to non-mucinous collections, which is characteristic pattern of mucinous accumulation and the extent of disease for preoperative planning and prognostic purposes.[10-12] MRI: shows location of mucocoele and its morphologic criteria identically to Computed tomography. T1 and T2 weighted MRI are more sensitive in distinguishing between mucin and fluid ascites.[13]

Carcinoid tumours of the appendix are relatively uncommon neoplasms. Although are considered rare pathology in children, these are the most frequent tumours of the gastrointestinal tract in childhood and adolescence.[4] They are usually benign neoplasm and the uncommon occurrence of metastasis is related to the primary tumour size and depth.[5] The reported incidence of appendiceal carcinoids in several studies ranges from 0.08 to 0.7% in surgical specimens.[5,6,14,15] The clinical presentation of the appendiceal carcinoids is similar to that of acute appendicitis, but in some cases the disease is incidentally found during surgery performed for another diagnosis or problem. Recurrent episodes of abdominal pain were reported in many cases may indicate partial obstruction of the appendiceal lumen by a tumour.[16] Symptoms of the carcinoid syndrome as flushing, diarrhoea, cardiac disease have been rarely reported and usually associated with liver or retroperitoneal metastases.[15] In these cases an increased urine excretion of 5-HIAA has been documented and in monitoring disease progression.[7] Our patient had no symptoms related to carcinoid syndrome, neither metastatic spreads nor 5-HIAA increased excretion. The majority of carcinoid tumours are discovered during the histological examination of the surgical specimen incidentally and rarely suspected before this examination.[14]

Left sided appendicitis occurs in two conditions, situs inversus totalis and mid gut malrotation. Situs inversus results from a rotation in the opposite direction of the viscera during the development of the embryo. Due to the contra lateral disposition of the viscera, the diagnosis and surgical approach of these patients may be more difficult than that of normal patients. About 40%-50% patients of acute appendicitis with left sided appendix present with pain in right iliac fossa. This phenomenon suggests that the central nervous system may not share in the general transposition.[17] This diagnostic dilemma causes delay in proper diagnosis and treatment. These incongruous

symptoms and signs in this co in obtaining accurate diagnosis. Ultrasound abdomen is helpful for diagnosis in most of the cases. However, CT scan abdomen is more accurate in localization of offending organ. Edition may lead to incisions in inappropriate sites which have been documented in greater than 40% of such cases. A detailed clinical history, physical examination and proper radiological investigations are useful.

CONCLUSION

Pseudomyxomaperinei and carcinoid tumour are rare presentations. Despite the current standard of treatment modalities as extensive surgical resection combined with chemotherapy, PMP and CT frequently recurs with treatment options being limited at recurrence and with severe impact on quality of life. Perforated appendix in LIF is also a rare presentation which needs appendicectomy, perforation closer with omental patch.

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