

Acute Abdomen Secondary to Appendiceal volvulus: a case report

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Introduction

Appendiceal torsion is an uncommon precipitating factor for acute appendicitis. In adults, it is found to be in association with appendiceal mucocele, whilst primary torsion occurs in the pediatric age group.

Case Presentation

A 38 year old lady presented with a 5 day history of acute lower abdominal pain with a progressive course. This was associated with nausea, reduced appetite and constipation. She was agitated and was showing manifestations of peritonitis. Her biochemical markers came back with raised inflammatory markers of CRP139, WCC 19 and Nuet 16. CT scan of the abdomen and pelvis showed tubular fluid collection with irregular wall just superior to the bladder and a twist with tapering towards it on the right. This was suggested to be a torsion/volvulus of the appendix which resulted in appendicitis. Mucocele could not be ruled out. As well as this, extensive inflammatory changes were suggestive of peritonitis. The plan was to perform a diagnostic laparoscopy plus intervention as appropriate. The intraoperative finding were intraperitoneal pus collection, a distended appendix filled with mucus and twisted 720° at the base. Laparoscopic appendectomy, peritoneal toilet and placement of pelvic drain were done. The histopathological finding of the specimen was acute appendicitis with low grade mucinous neoplasia.

Discussion

Mucocele of the appendix is a rare condition. They represent 0.2-0.3% of all surgical appendectomy specimens. Approximately, 50% of mucoceles are asymptomatic and incidentally discovered, whilst 40% present with acute appendicitis [1]. There are two suggested pathogenesis: one being an obstructive mechanism causing high pressure in the appendix, resulting into gross mucinous accumulation and second being a neoplastic process [2][3]. The latter is the most frequent histopathological finding. Appendiceal mucinous neoplasms are classified into low grade appendiceal mucinous neoplasm (LAMN), high grade appendiceal mucinous neoplasm (HAMN) and mucinous appendiceal adenocarcinoma [3]. It is considered the most common cause of pseudomyxoma peritonei (PMP) [4][5]. It is important to differentiate between the pathological subtypes of mucinous neoplasms as the risk of occurrence of PMP may vary according to that. The incidence of PMP is 36% with high grade dysplasia and 6% with low grade dysplasia, which would reflect on survival rate [5]. This would affect the treatment modalities; follow up planning, prognosis and risk of recurrence. It is also important that extra precautions should be taken whilst handling the specimen intraoperatively to avoid spillage of the content as that might lead to implantation of neoplastic cells in the peritoneum [5][6][7]. The proposed treatment for appendiceal neoplasms varies according to the extent of the disease [6][8]. In localised disease, most of the time appendectomy is sufficient, however,

right hemicolectomy is reserved in case of perforation, base invasion, tumour size >2 cm, positive margins in appendectomy specimen or high mitotic rate. The appropriate modality in LAMN with peritoneal spread is dual therapy by cytoreductive surgery and HIPEC [6][8]. While in high grade appendiceal adenocarcinoma, neoadjuvant chemotherapy is added to that followed by adjuvant chemotherapy in case of nodal involvement [8]. LAMN with peritoneal mucin spillage has an increased risk of progression to extensive intra-abdominal disease [6]. Therefore, it is important that extra precautions should be taken whilst handling the specimens intraoperatively to avoid spillage of the content as that might lead to implantation of neoplastic cells in the peritoneum and that might affect the overall survival rate.

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