Caecal tumour masquerading as an appendicular mass

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Abstract

Appropriate management of appendix mass is based on an accurate diagnosis of the underlying pathology. This is a report of a complex patient presenting with an appendix mass, whose surgery was deferred due to severe co-morbidities and who later died from severe metastatic disease. A 65-year-old lady presented with right iliac fossa pain and a mass. She was treated for an appendix mass initially and when the mass failed to resolve after four weeks, she was thoroughly investigated for the possibility of a tumour. Severe co-morbities had a significant impact on her management as definitive surgery was delayed. She represented 10 months after the initial admission with small bowel obstruction and died of metastatic caecal cancer. Management of *appendix mass* must entail a careful approach to investigating and treatment with emphasis on early intervention if the mass does not resolve promptly. This will avoid delayed diagnosis, treatment and a detrimental impact on prognosis.

Introduction

Appropriate management of appendix mass is predicated on an accurate diagnosis of the underlying pathology. We report a complex case of a patient presenting with an appendix mass, whose surgery was deferred due to severe co-morbidities and who later died from severe metastatic disease.

Case Report

CJ, a 65-year-old lady was admitted to the surgical assessment unit with a 12 day history of right iliac fossa pain. Her past medical history included severe chronic obstructive pulmonary disease (exercise tolerance 20 metres, FEV1/FVC ratio 24%), osteopenia, depression and polycythaemia rubra vera. On examination she was found to have a tender mass in the right iliac fossa. She had raised inflammatory markers (white cell count 19.1×10^9 cells/L, C-reactive protein 66 mg/L). Her haemoglobin was 12.8 g/dL and renal function tests were normal. An initial ultrasound scan (USS) showed a tender poorly defined bowel associated mass in the right iliac fossa with surrounding inflammatory changes and lymphadenopathy. A computed tomography (CT) scan of her abdomen showed an ill defined bi-locular mass measuring 4.6×3.4 cm intimately related to the small bowel and abutting the right iliopsoas muscle. The CT report noted the lymphadenopathy and a small lesion in the liver which was too small to characterise and concluded that the bowel mass was possibly a mucinous tumour of the appendix. CJ was treated with antibiotics for a presumed appendix mass and discharged after two days.

At surgical follow up four weeks later her pain had resolved but the mass in the right iliac fossa was still present. CT colonoscopy four weeks after initial presentation showed no colonic mucosal abnormality, reduction in the size of the retrocaecal mass and unchanged lymphadenopathy. The possibility of underlying malignancy was raised in view of the persisting lymphadenopathy. A multidisciplinary team meeting decided that CJ should undergo a colonoscopy, which was normal except for diverticulosis in the sigmoid colon. A laparoscopy was planned after careful anaesthetic review. The outcome of the anaesthetic review was unknown as CJ became lost to follow up.

CJ presented seven months later to the surgical assessment unit with a two week history of progressively worsening symptoms of abdominal pain, distension, vomiting, constipation and a one stone weight loss. On examination she was cachectic, dehydrated, tachycardic and had a distended abdomen with visible bowel loops and tinkling bowel sounds. Blood tests revealed a microcytic anaemia (haemoglobin 10.5 g/dL, mean cell volume 75 fL), raised inflammatory markers (white cell count 16.2×10^9 cells/L and C-reactive protein 156mg/L) and a urea of 23.2 mmol/L. Abdominal x-ray showed small bowel dilatation and CT scan (Figure 1) confirmed small bowel obstruction secondary to a retrocaecal mass which was now invading the right iliopsoas muscle and extending to the inguinal canal. There were also nodal metastases present and ascites in addition to liver and lung secondaries. Treatment options were discussed with CJ and spouse, who agreed that surgical intervention was futile. She continued to deteriorate and was started on the Liverpool Care Pathway and died the following day.

Discussion

The management of an appendix mass remains controversial. Historically appendix masses were initially treated with antibiotics and if successful an interval appendicectomy performed 6-8 weeks later. If there was no resolution (fever, increasing mass, systemic illness, rising inflammatory markers), surgical intervention became necessary to deal with the abscess. Current evidence suggests that there are suitable and safe alternatives to this approach. Suitability for conservative treatment with antibiotics is based on the absence of systemic sepsis or peritonitis. There is current evidence to suggest that early appendicectomy is a good treatment choice, even if these factors are not present.[1-5] The advocates of this approach suggest that there is a shorter hospital stay, avoidance of recurrent pain in some patients and misdiagnosis of cancer. Some authors suggest that conservative treatment with antibiotics may be sufficient if the patient does not have any recurrent symptoms, arguing that only 3-25% have recurrent pain and so appendicectomy could be avoided in a large number of patients.[6-8] Given that the complication rate of appendicectomy is around 13%,[9] such an approach will prevent having unnecessary complications. However, others still advocate interval appendicectomy to avoid ongoing pain.[4,10-12] As demonstrated in this case conservative treatment is not an option if there is a risk of underlying malignancy or alternative

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Figure 1. Computed tomography scan showing enlarging right retrocaecal mass now invading the iliopsoas muscle with small bowel obstruction.

diagnosis. This should be considered especially in those patients over forty who have a higher risk of associated pathology.[2] Rare tumours, such as appendiceal tumours can present atypically and so a high index of suspicion is needed to diagnose such conditions.[13-14] This patient had extensive investigations to determine the presence of malignancy but somehow a definitive diagnosis was never made prior to her final admission 11 moths later. CT scanning has shown its place in the investigation of acute abdominal pain and has a sensitivity approaching 93-98% and specificity of 92%.[15-19] The circumstances surrounding the loss to follow up remain unclear as the patient herself was unable to explain this. It would appear a definitive procedure was deemed too risky in view of her severe co-morbidities. Whether her prognosis might have been improved by earlier definitive surgery in the presence of what turned out to be an aggressive tumour is not known.

This case demonstrates the complexity of diagnosis of appendix mass and the influence of severe patient co-morbidities on management decisions. Management of *appendix mass* must entail a careful approach to investigating and treatment with emphasis on early intervention if the mass does not resolve promptly. This will avoid delayed diagnosis, treatment and a detrimental impact on prognosis.

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