SOLITARY CAECAL DIVERTICULUM

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QUITE commonly a clinical diagnosis of acute appendicitis is not confirmed by the operative findings. On finding a normal appendix at laparotomy other pathology should be sought and on occasions unusual lesions may be detected as illustrated by the following cases, all of which presented in a District General Hospital during the last year.

CASE REPORTS:

Case 1. A 61 year old male was admitted with a two day history of anorexia, vomiting and abdominal pain which was initially central and crampy, becoming continuous in the right iliac fossa.

On examination he was dehydrated, pyrexial and had tenderness, guarding and rebound in the right iliac fossa, where it was thought that a mass was palpable; rectal examination revealed right sided tenderness. A diagnosis of appendicitis was made and at laparotomy through a right paramedian incision, the appendix was found to be normal, but a 3 cm. diameter mass was identified in the ileocaecal angle which was considered to be a small carcinoma. A right hemicolectomy was performed with an uneventful recovery.

Case 2. A 54 year old male was referred with a 48 hour history of central abdominal pain, later referred to the right iliac fossa. The patient had been nauseated, but had not vomited and had no other symptoms.

Examination showed a fit man, pyrexial (37.8°C) with tenderness, guarding and minimal rebound in the right iliac fossa; there were no palpable masses and rectal examination revealed no abnormality. Acute appendicitis was diagnosed but at laparotomy, through a grid iron incision, the appendix was normal. There was a 1.5 cm. mass palpable in the posterior wall of the caecum. This was thought to be either a diverticular abscess or a neoplasm, and as the latter could not be excluded the incision was extended and a right hemicolectomy was carried out followed by an uneventful recovery.

Case 3. A 45 year old male presented with a one week history of abdominal pain; at first central and crampy and later continuous in the right iliac fossa. There were no other symptoms.

On examination he was in good health, apyrexial and the only positive abdominal finding was tenderness on deep palpation in the right lower abdomen. Rectal examination demonstrated right sided tenderness. He was thought to have
acute appendicitis and the abdomen was explored through a grid iron incision. A suspected tumour 1.5 cm. in diameter was palpable in the caecum. The grid iron incision was closed and a right hemicolectomy performed through a right paramedian incision. The patient made an uncomplicated recovery.

The pathology reports in each of these cases identified the lesion histopathologically as an inflamed solitary caecal diverticulum.

DISCUSSION:

Solitary caecal diverticula are rare; approximately 400 have been described in the world literature. Although diverticular disease of the left colon may sometimes spread to the ascending colon and caecum, the solitary caecal diverticulum is considered to be an entirely separate entity, tending to present in a younger age group, usually around the fourth decade. Anatomically all the muscle layers found in the bowel wall are present in at least part of the diverticulum. Although the aetiology is unknown, some authors implicate an embryological remnant which appears at the sixth week and fails to atrophy; others, that they occur at a congenital weak spot in the wall of the caecum.

Solitary caecal diverticulae rarely give rise to symptoms unless they become inflamed. Inflammation is usually precipitated by a faecolith becoming lodged in the cavity of the diverticulum. It may progress to perforation, or to an inflammatory mass or abscess in the wall of the caecum simulating a carcinoma. Acute inflammation of the diverticulum usually presents with symptoms and signs indistinguishable from acute appendicitis as demonstrated in these cases.

At operation a high index of suspicion is important in making a correct diagnosis. If the appendix is normal and a caecal mass is encountered this may be benign inflammation, but is more likely to be a carcinoma. It is vital to differentiate between these conditions to obviate the need for extensive bowel resection. The mortality from emergency right hemicolectomy for carcinoma of the caecum is approximately five times greater than that for any local form of operation.

On encountering such a mass at laparotomy the caecum should be palpated through an unaffected part of the opposing bowel wall. Carcinoma always involves the mucosa giving rise to the characteristic malignant ulcer or to cauliflower or polypoid growths. In caecal diverticulitis the mucosa is not affected, and the ostium of the diverticulum may be identified or it may be obvious that the process is restricted to the bowel wall and surrounding fibro-fatty tissue. If doubt persists caecotomy may be justified to inspect the mucosa as this procedure with limited resection carries a much lower mortality than right hemicolectomy. The treatment of solitary caecal diverticulum depends on the findings at laparotomy in each individual case. It should, however, consist of the simplest operative procedure compatible with eradication of the condition.

When the condition is recognised as acute diverticulitis and the inflammation
is limited to the diverticulum, diverticulectomy or merely drainage with antibiotic cover is sufficient. If the diverticulum is perforated with local peritonitis or abscess formation, closure of the perforation, drainage and appropriate antibiotic therapy is an acceptable form of management.

If the perforation is too large to be closed or cannot be differentiated from carcinoma a Mickulicz procedure with excision of the mass and secondary ileocolostomy may be performed but a right hemicolecction may be carried out with the inherent risks of this emergency procedure.

**SUMMARY:**

Solitary caecal diverticulum is a rare condition, usually mistaken for acute appendicitis pre-operatively and for carcinoma of the caecum at laparotomy. Although most masses in the caecum are neoplastic, the differentiation of inflammatory from neoplastic lesions may be aided by careful palpation and inspection of the bowel wall and mucosa, leading to less aggressive surgery. Treatment should consist of the simplest operation compatible with eradication of the condition.

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