Ligneus caecitis: A Granulomatous inflammation mimicking malignancy

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ABSTRACT

Introduction: Ligneous caecitis is a term given to granulomatous lesions of the caecum which tend to mimic malignancy in their clinical presentation. It usually occurs in a setting of chronic appendicitis. **Case presentation:** A 52-year-old man presented to a tertiary hospital with abdominal pain and bilious vomiting of 3 months duration. The abdominal pain was in the right iliac fossa, colicky in nature. He had on and off episodes of abdominal distension and vomiting and took symptomatic treatment at a local hospital. He had significant weight loss of 10 kg over a 3 months period. General physical examination was unremarkable. Clinically he had non-tender, vague, firm to hard mass in the right iliac fossa and lumbar region with an irregular surface. The mass was approximately 5x4 cm and non-mobile. Colonoscopy showed a 3 cm nodular appearing mucosa in the ascending colon, with an infiltrative look, and a hard feel on biopsy. The biopsy was negative for malignancy. Computed tomography of the abdomen showed a heterogeneously enhancing irregular circumferential wall thickening involving the caecum, proximal ascending colon, ileocaecal junction and approximately 6cm of the terminal ileum with engorgement of the mesenteric vasculature adjacent to the lesion and enlarged pericolic lymph nodes suggestive of malignancy. Patient underwent a right radical hemicolectomy. Final pathological impression of ligneous caecitis secondary to ruptured retrocaecal appendicitis was imparted. Postoperative period was uneventful. **Conclusion:** Ligneous caecitis, a rare disease has a clinical resemblance to malignancy of the caecum. The condition presents as large bowel obstruction, with the presence of a palpable mass in the right iliac fossa. It is important for the clinician to be aware of such a condition, thereby reducing the need of more radical surgeries which are usually reserved for malignancies.

Keywords: Caecitis, Cancer; caecum, hemicolectomy, retrocaecal appendicitis, typhlitis

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CONFLICT OF INTEREST: NIL

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INTRODUCTION

Ligneous caecitis is a term given to granulomatous lesions of the caecum which tend to mimic malignancy in their clinical presentation. It usually occurs in a setting of chronic appendicitis. Here we are presenting a case of a middle aged man with a mass in the right iliac fossa which was provisionally diagnosed as carcinoma caecum and the final histopathology established the diagnosis of ligneous caecitis.

CASE REPORT

A 52-year-old man presented to a tertiary hospital with abdominal pain and vomiting of 3 months duration. The abdominal pain was in the right iliac fossa, colicky in nature. The vomitus was bilious. He complained of on and off episodes of vomiting and abdominal distension and was taking treatment for the same at a local hospital and was referred to us for the persistence of symptoms. He had significant weight loss of 10 kg over a 3 month period. General physical examination was unremarkable. On abdominal examination he had a vague mass palpable in the right iliac and lumbar region approximately measuring 5x4 cm. The mass was non tender, firm to hard in consistency and non mobile. There was no free fluid in the abdomen. In view of the above findings a provisional diagnosis of carcinoma of the caecum was made.

Colonoscopy: showed a 3 cm nodular appearing mucosa in the caecum with infiltrative look and a hard feel on biopsy. Biopsy of the lesion showed no evidence of malignancy. There was no synchronous lesion

Contrast enhanced Computed tomography (CECT) of the abdomen showed a heterogeneously enhancing irregular circumferential wall thickening involving the caecum, proximal ascending colon, ileocaecal junction and approximately 6cm of the terminal ileum with engorgement of the mesenteric vasculature adjacent to the lesion and enlarged pericolic lymph nodes largest measuring 10 x 7mm. The lesion was infiltrating into the adjacent mesenteric fat, transversus

abdominis and internal oblique muscles along the lateral abdominal wall, quadratus lumborum posteriorly and into the iliopsoas muscle posteromedially (Figure 1 A and B). CECT findings were suggestive of malignancy of the caecum.

Figure 1(A): Contrast enhanced Computed tomography of the abdomen showed a heterogeneously enhancing irregular circumferential wall thickening involving the caecum, proximal ascending colon, ileocaecal junction and approximately 6cm of the terminal ileum with engorgement of the mesenteric vasculature adjacent to the lesion

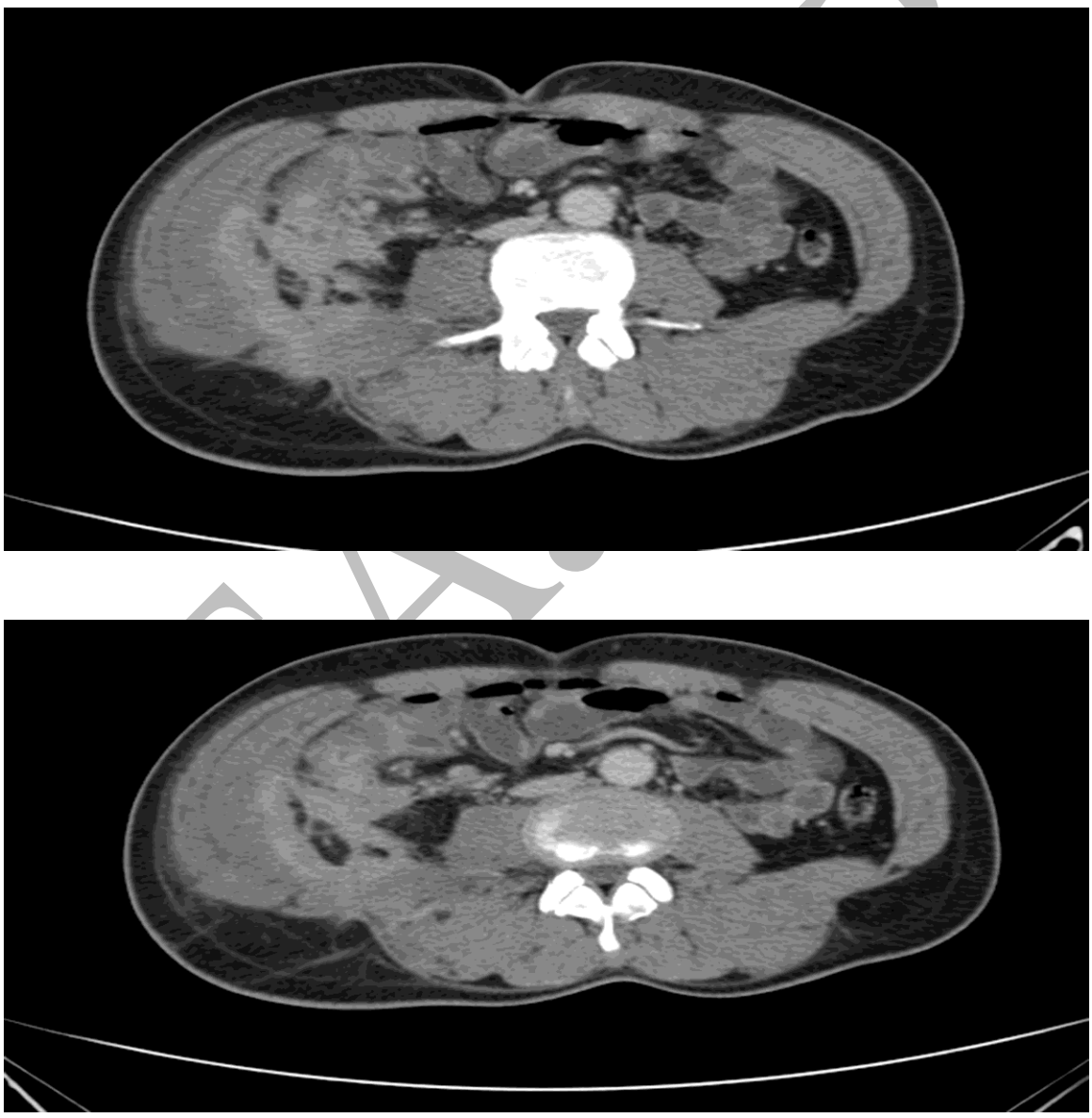

Figure 1 (B): the lesion seen to be infiltrating into the adjacent mesenteric fat, transversus abdominis and internal oblique muscles along the lateral abdominal wall.

Intraoperatively: A right radical hemicolectomy was planned. There was a hard mass formed by caecum, retrocaecal appendix and proximal part of ascending colon, which was infiltrating the psoas and quadratus lumborum muscles. The tumour along with lymphnodes was resected and an ileotransverse anastomosis was done.

Final Histopathology: Caecum showed ulcerated, congested, edematous mucosa with mixed inflammatory infiltrate and transmural lymphoplasmacytic infiltration. Lymph nodes procured were showing only reactive hyperplasia. Sections studied from periappendicular mass showed mixed inflammatory infiltration along with dense bands of collagen, proliferating myofibroblasts entrapping the adjacent adipose tissue. No evidence of tuberculosis, dysplasia or malignancy. Final pathological impression of ligneous caecitis secondary to ruptured retrocaecal appendicitis was imparted (Figure 2).

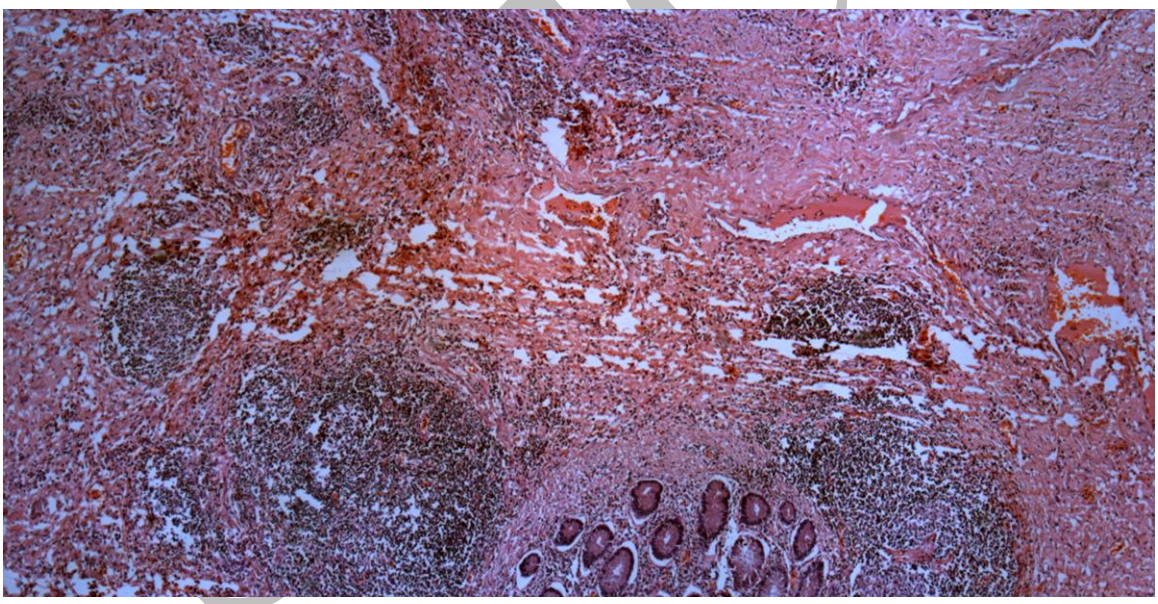

Figure 2: Histopathology shows mixed inflammatory infiltration along with dense bands of collagen, proliferating myofibroblasts entrapping the adjacent adipose tissue. No evidence of tuberculosis, dysplasia or malignancy.

DISCUSSION

Ligneous caecitis is a term given to granulomatous lesions of the caecum which tend to mimic malignancy in their clinical presentation, occurring in a setting of chronic appendicitis [as discussed by Gruhn [1]]. It is an unusual inflammatory and fibrotic process of the periappendiceal and pericecal tissues. Another common name given to this rare condition is ligneous perityphlitis. Incidence is most common in the age range of 70 and above [as noted by Rex [2]].

The condition presents as large bowel obstruction, with the presence of a palpable mass in the right iliac fossa. This presentation in a patient of age above 70 years usually points to a clinical diagnosis of carcinoma of the caecum. Thus, these patients are often managed as suspected cases of carcinoma of the caecum.

The postulated cause of the disease (and perhaps why it is seen mostly in cases of chronic appendicitis) is incomplete resolution of an appendicular abscess in a case of retrocaecal appendix, [as seen by Neil et al in their book on inflammatory disorders of appendix [3]]. It is usually located in the right iliac fossa lateral to the cecum but can occur in other sites, depending on the original location of the appendix. The pathology is due to the appendix being replaced by or incorporated into a large mass of granulation tissue or fibrous tissue. In addition, this tissue tends to grow around the adjacent caecum or ileum, binding the appendix to itself such that separating the appendix from the mass of tissue is difficult if not impossible, [as seen by Neil et al in their book on inflammatory disorders of appendix [3]].

Imaging such as erect X-Ray abdomen and Computed tomography of the abdomen will show signs of intestinal obstruction and presence of a mass in the caecum. Barium enema shows filling defect in the caecum [as discussed by Le Bruhn [4]]. In cases which present without obstruction, colonoscopy and biopsy maybe helpful in diagnosing this condition preoperatively.

Diagnosis of the condition is done on histopathological evaluation, and often it is missed because even on diagnostic laparotomy, the mass tends to appear hard on palpation [as described in the gastrointestinal tract chapter in textbook of Rosai & Ackerman's Surgical pathology [5]]. The hardness is "woody-hard", and from this came the term "ligneous" caecitis [as noted by Rex [2]].

The lesion shows a histopathological picture of granulomatous inflammation with fibroblastic proliferation of various degrees causing variations in hardness of the tumour. On microscopy acute, subacute, or chronic (or both) inflammatory reaction with fibroblastic proliferation and occasional giant cells are seen [as noted by Rex [2]].

The surgeons may proceed with segmental resection of the large bowel or, alternatively, hemicolectomy can be done.

CONCLUSION

Ligneous caecitis, a rare disease has a clinical resemblance to malignancy of the caecum. The condition presents as large bowel obstruction, with the presence of a palpable mass in the right iliac fossa. It is important for the clinician to be aware of such a condition, thereby reducing the need of more radical surgeries which are usually reserved for malignancies.

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