Diffuse Colonic Lipomatosis, Presenting as Perforation Peritonitis and Mimicking Carcinoma Colon

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Abstract Lipomas and lipomatosis of colon are rare in clinical practice. We herein report a case of diffuse colonic lipomatosis, fifth such case in literature which presented as perforation peritonitis, a presentation, never been reported earlier. On laparotomy, the findings suggested malignancy and appropriate surgery was done. Diffuse Colonic Lipomatosis, a rare and benign condition mimicks malignancy and should be kept as a differential diagnosis is unusual cases of colonic perforations.

Keywords Diffuse colonic lipomatosis

Introduction

Lipomatous lesions of the colon may be solitary or multiple, encapsulated lipomas or diffuse, discrete, unencapsulated lobules of adipose tissue, called lipomatosis and though they are second most common benign tumours of the colon, they are infrequently encountered in clinical practice [1, 2]. A patient of diffuse colonic lipomatosis, presenting as perforation peritonitis and presumptively diagnosed as carcinoma colon during surgery is presented. This is the fifth case of

diffuse colonic lipomatosis in literature and presentation with perforation has never been reported earlier.

Case History

A 33 year old male presented with severe pain in abdomen since one day and obstination for last twelve hours. There was no previous history of any chronic abdominal disease. The skiagrams of chest and abdomen revealed free air under right dome of diaphragm suggesting perforation peritonitis (Fig. 1). The patient was resuscitated and taken up for laparotomy.

On exploration, the peritoneal cavity contained haemorrhagic fluid. There was a firm to hard, indurated lesion involving almost whole of right colon and extending upto proximal transverse colon. A perforation of 1×1 cm was present at hepatic flexure on anti mesenteric border. There was no hepatic, peritoneal or lymph node metastasis. Right hemicolectomy with end to end ileo transverse anastomosis was performed. Serum CEA level, done post operatively was 0.05 ng/ml (normal in smokers—0–10 ng/ml).

Gross examination of the resected specimen, done by the pathologist, revealed thickened gut wall with cut section showing grey to greyish yellow areas beneath mucosa. On histopathological examination (Fig. 2), there was superficial infarction of the mucosa, lobules of mature adipose tissue in the sub mucosa throughout the resected specimen and extensive fibrosis of sub mucosa, extending into and replacing muscularis mucosa and serosa (Fig. 3). It was reported as diffuse colonic lipomatosis with serositis.

The post operative period was uneventful; the patient was discharged on 7th post operative day. A CT scan done 8 months after discharge shows discrete sub mucosal deposits of fat in the remaining colon, thus corroborating the histopathological diagnosis. The patient has been asked

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Fig. 1 Air under diaphragm

to get follow up colonoscopies every three months for the next two years.

Discussion

Benign lipomatous lesions of the colon may be either lipomas or lipomatosis and though they are second most common benign tumours of the colon, they are infrequently encountered in clinical practice [2].

Lipomas, which are well encapsulated aggregate of adipose cells, may either be solitary or multiple and if later, there are rarely more than 4 in a single patient [3]. In colonic

Fig. 2 Diffuse replacement of submucosa by adipose tissue & at

Fig. 3 Fatty replacement of submucosa and oedema (H&E x 100)

lipomatosis, there are lobules of mature, unencapsulated adipose tissue lying clumped in the submucosa of the colon and it may be segmental lipomatosis in which such lobules lie in a single segment of colon [1]. 10 cases of segmental lipomatosis have been described by Catania et al. [1]. A case of diffuse colonic lipomatosis reported by Bates and Smith was actually that of segmental lipomatosis [4].

In the second type of colonic lipomatosis i.e. diffuse lipomatosis the lobules of adipose tissue are present in the submucosa of whole of the colon. Only four cases of this type have been reported in literature [1, 4, 5, 7].

Lipomas and lipomatosis of the colon are mostly asymptomatic but they may precipitate a surgical emergency such as intussusceptions, obstruction or bleeding [8]. Our patient presented with a perforation and this might be due to the fact that adipose tissue is a relatively avascular tissue and hence the mucosa overlying lipomatous lesions of colon is prone to ischemia and necrosis ultimately leading to perforation. Evidence of ischemia and necrosis around the perforation was reported by pathologist in the index case as well.

Clinical diagnosis may be difficult but a pre operative CT scan may be of value. The intra operative appearance of the lesion is confusing and it may be difficult to exclude carcinoma on gross appraisal during surgery [6]. Frozen section may be of value in such circumstances though its availability during emergency surgery is rare.

Taylor and Wollf have reported that 11% patients of segmental lipomatosis were operated keeping malignancy as diagnosis on first gross appraisal in Mayo Clinic between 1976 and 1985 [8]. The diagnosis is, hence, histopathological. Catania et al have reported association of segmental or diffuse lipomatosis with cutaneous, epiploic, small intestinal, gastric or duodenal lipomas or with diverticula of colon or neurofibromatosis but no such

association was found in our case [1]. Some reports have linked the disease to Proteus syndrome or to Bannayan-Riley-Ruvalcaba syndrome but no such association were found in our case [4].

Diffuse Colonic Lipomatosis like other lipomatous lesions of the colon is a rare entity and it frequently mimicks malignancy. Its presentation with perforation has never been reported earlier. It should be kept as a differential diagnosis is unusual cases of colonic perforations.

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