Malignant Duodeno-Colic Fistula
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Citation

Abstract
Malignant Duodeno-colic fistula is a very rare complication of malignancies of colon, duodenum, pancreas or gallbladder. The passage of hydrochloric acid and bile salts from duodenum into the colon has an irritative effect on the colonic mucosa resulting in diarrhea. The diagnosis is established with upper and lower gastrointestinal tract contrast studies. We report a case of Duodeno-colic fistula secondary to an adenocarcinoma of hepatic flexure. Extended right hemicolectomy with Whipple's procedure was done.

CASE REPORT
A 40-year male, presented with history of passage of loose stools, 10-15 minutes after oral foods and loss of weight since 1 year. Examination revealed a hard, non-tender mass in the right hypochondrium extending up to the right lumbar region, moving with respiration. Routine haemogram and liver function tests were within normal limits. FNAC of the mass revealed a moderately differentiated adenocarcinoma. Barium meal follow through showed a fistulous communication from the second part of duodenum to the hepatic flexure (FIG.-1).

Figure 1
Figure 1: Barium meals follow through showing a fistulous communication from the second part of the duodenum with the hepatic flexure with the contrast filling caecum and transverse colon.

Upper G.I. endoscopy showed a proliferative growth in the second part of duodenum extending up to the first part and partially encroaching the opening of ampulla of vater. Contrast-enhanced CT abdomen revealed a grossly irregular thickened wall of duodenum with infiltration into ascending colon, hepatic flexure and head of pancreas with a Duodeno-colic fistula, suggestive of a carcinoma (FIG.-2).
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**Figure 2**
Figure 2: CECT abdomen showing a gross irregular thickening of second part of duodenum with a defect in the lateral wall communicating with the hepatic flexure.

Exploratory laparotomy revealed a necrotizing growth in the transverse mesocolon extending to the second and third part of duodenum, uncinate process of pancreas and hepatic flexure with a fistulous connection between the hepatic flexure and the second part of duodenum. Extended right hemicolectomy with Whipple’s procedure was done. The patient had an uneventful post-operative recovery.

Histopathology report suggested moderately differentiated adenocarcinoma of colon infiltrating into the duodenum and pancreas.

**DISCUSSION**
Malignant Duodeno-colic fistulas have been reported with malignancies of colon, duodenum, pancreas and gallbladder. The passage of hydrochloric acid and bile salts from duodenum into the colon have an irritative effect on the colonic mucosa, resulting in diarrhea which is further aggravated by bacterial overgrowth and mechanical bypass. Poor intake, impaired absorption because of bypass and catabolic sepsis leads to weight loss. Other characteristic symptoms include feculent vomiting and foul smelling eructation.

The diagnosis is established with radiological imaging in the form of upper and lower gastrointestinal tract contrast studies and CECT abdomen.

The complexity of the pancreaticoduodenal area makes the operative management challenging.

Palliative surgery is indicated in extensive retroperitoneal involvement of the primary tumour. The goal of palliation is to exclude the tumour and the fistula. Ileotransverse anastomosis along with gastrojejunostomy usually relieves the symptoms of Malignant Duodeno-colic fistula. Definitive surgery involves resection of the tumour and the fistula en-block. Colectomy with partial duodenectomy and primary duodenal closure of the duodenal defect has been reported with minimal duodenal involvement. Serosal patch duodenal reconstruction has also been attempted in literatures. Highest survival rates have been reported with Colectomy combined with pancreatoduodenectomy (Whipple’s Procedure) due to resection of the tumour and the fistula as well as adequate regional lymph node dissection.

**CONCLUSION**
Malignant Duodeno-colic fistula is a very rare complication of malignancies of colon, duodenum, pancreas or gallbladder. The diagnosis is relatively easily established by radiological imaging. Surgical management ranges from a bypass of the tumor along with the fistula in the form of ileotransverse anastomosis and gastrojejunostomy to a complete resection in the form of Colectomy with a partial duodenal resection or a Whipple’s procedure.

**References**
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