

## Case Report

# Gastric Migration of Colonic Self-expanding Metal Stent: Rare Complication Postcolonic Stenting

Sridhar Sundaram, Srijan Mazumdar, Prachi Patil, Shaesta Mehta

Department of Digestive Diseases and Clinical Nutrition, Tata Memorial Centre, Mumbai, Maharashtra, India

### ABSTRACT

Colonic self-expanding metal stent (SEMS), although associated with high technical and functional success in malignant colonic obstruction, may be associated with complications such as migration. Furthermore, fistulous tract formation with SEMS *in situ* has been reported only in few case reports previously. Here, we present a case of colonic SEMS migrating through a gastrocolic fistula into the stomach. There are no previous reports of migration of a colonic SEMS into a proximal segment of the gastrointestinal tract.

**KEYWORDS:** Colonic self-expanding metal stent, gastrocolic fistula, migration of colonic stent

## INTRODUCTION

Endoscopic colonic self-expanding metal stent (SEMS) placement is a therapeutic intervention indicated commonly for the palliation of malignant colonic obstruction. Complications such as perforation, migration of stent, occlusion, ulceration, and erosions occur due to colonic SEMS placement. Proximal migration of stents occurs rarely, and migration through fistulous tract has not been previously reported.

## CASE REPORT

A 30-year-old female, diagnosed to have metastatic carcinoma of the pancreatic tail, presented with complaints of diffuse persistent abdominal pain, more in the epigastric region for 15 days and feculent vomiting for 10 days. She also had complaints of loose undigested stools 1–2 h after meals without abdominal distension or bleeding. She had previously undergone colonic stenting with a 25 mm × 12 cm WallFlex colonic stent in view of an infiltrated stricture in the splenic flexure of the colon caused by tumor infiltration, 10 months prior. This was followed by palliative chemotherapy (Gemcitabine with Nab-Paclitaxel) which was withheld after the onset of the above-mentioned symptoms. Patient was vitally stable, pale, and dehydrated with tenderness in the epigastric region. Patient was admitted for fluid resuscitation, was kept nil per orally, and underwent computed tomography abdomen for evaluation, which showed displacement of colonic stent with proximal

end in gastric lumen with liver metastases and regressed pancreatic tail lesion [Figure 1]. Upper gastrointestinal (GI) endoscopy showed the presence of a gastrocolic fistula with the open colonic stent lying completely inside the gastric lumen [Figure 2]. The fistulous opening was large with feces seen in the stomach, and scope could be negotiated into the colon with ease [Figure 3]. Endoscopic removal of the stent was done with the help of rat tooth forceps [Figure 4]. Subsequently, surgery was done for closure of the gastrocolic fistula with distal pancreaticosplenectomy with sleeve gastrectomy and resection of splenic flexure with side-to-side colonic anastomosis. The patient had a stormy postoperative course with the development of an infected collection near the resected pancreatic segment and need for parenteral nutrition. The patient was optimized over a period of the next 4 weeks. The patient was subsequently continued on palliative chemotherapy. The patient did not develop symptoms of recurrent bowel obstruction over a period of 9 months after the surgery when she expired due to advanced disease.

## DISCUSSION

Colonic SEMS placement is associated with

**Address for correspondence:** Dr. Sridhar Sundaram, Department of Digestive Diseases and Clinical Nutrition, Tata Memorial Centre, Dr. E. Borges Road, Parel, Mumbai - 400 012, Maharashtra, India.  
E-mail: drsridharsundaram@gmail.com

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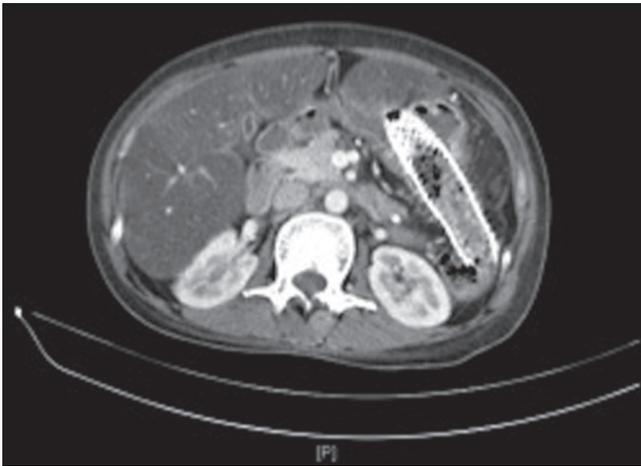
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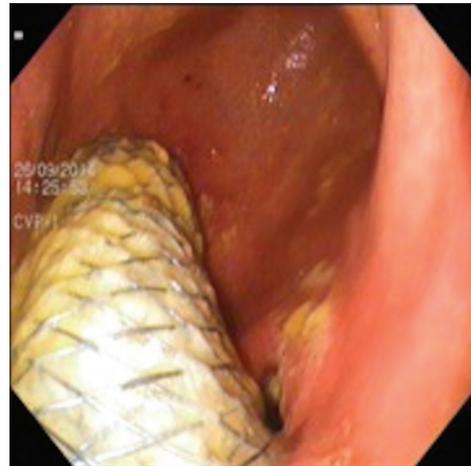


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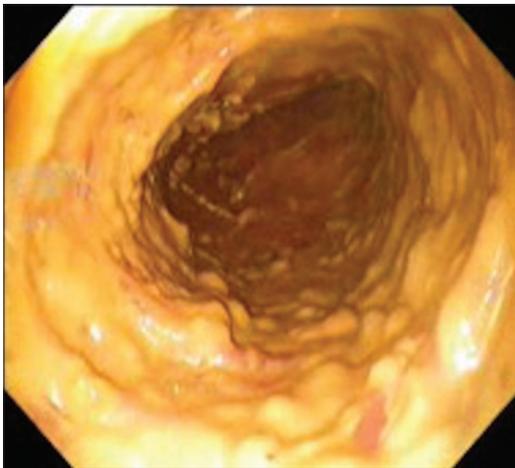
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**Figure 1:** Computed tomography image suggestive of stent displacement with proximal end in gastric lumen



**Figure 2:** Stent seen in gastric lumen



**Figure 3:** Colonic lumen coated with stools entered through fistulous opening



**Figure 4:** Retrieved stent

technical and clinical success of approximately 95%–99%.<sup>[1]</sup> Complication rates are around 25%, which include perforation, occlusion, erosion, ulceration, and migration.<sup>[1]</sup> Enterocolic fistula formation is a rare complication of colonic stenting reported only in six cases previously. One of these was reported in a patient with underlying Crohn's disease, having a predisposition for fistula formation, who was found to have an ileosigmoid fistula.<sup>[2]</sup> Another case report suggests that an ileocolonic fistula was found in a patient with previously undiagnosed ulcerative colitis with colonic SEMS *in situ* for rectal cancer.<sup>[3]</sup> Even in a large retrospective study by Suh *et al.* from Korea among 55 patients who underwent colonic stenting, only one case of enterocolic fistula was reported.<sup>[4]</sup> This is the first report of a gastrocolic fistula developing in a patient with migration of colonic SEMS. In this case, the distal pancreatic cancer helped in creation of a fistula between the posterior wall of

stomach and splenic flexure of the colon, which was confirmed by the imaging and intraoperative findings. Spontaneous gastrocolic fistulas, although extremely rare, are known to occur primarily with malignancies of the stomach and colon. A series published in 1952 of 1500 gastric malignancies and 3200 colonic malignancies showed the prevalence of only 11 gastrocolic fistulae.<sup>[5]</sup> No case reports of spontaneous gastrocolic fistulae due to pancreatic tail malignancy have been reported previously.

Extrinsic compression of the colon rather than intrinsic disease is associated with higher incidence of stent complications and failure. Migration is known to occur in 4%–10% of patients with colonic stents, while perforation occurs in 4.8% in various studies.<sup>[6]</sup> Migration can occur distally or less commonly proximally. It may be precipitated by chemotherapy or dilatation before stent placement with a usual presentation within 1–2 weeks of stent placement. Pain, irritation, recurrence of obstructive

symptoms, and rarely perforation may occur due to migrated stents. Migrated stents may be retrieved endoscopically with the need for a hood to protect anal canal and mucosa from injury. Rarely, stent retrieval may need surgery.<sup>[7]</sup> Migration through fistula into proximal part of the GI tract has not been reported previously.

In our patient, there was successful stent placement with function for 10 months before patient presented with symptoms of fistulization. Endoscopic closure techniques for GI fistulae<sup>[8]</sup> include fibrin sealants, over the scope clips, and endoscopic suturing devices, which were not feasible in our patient due to the large size of fistula.

We would like to emphasize on having a high index of suspicion for fistula formation in a patient with colonic SEMS *in situ*, if the patient develops symptoms of diarrhea, vomiting, and abdominal pain. Although colonic stenting is associated with high rates of success in terms of the technical and clinical parameters, it is associated with complications frequently, and these should be addressed at the earliest with appropriate investigations and treatment.

#### **Declaration of patient consent**

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and

due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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#### **Conflicts of interest**

There are no conflicts of interest.

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