Spontaneous Bowel and Esophageal Perforation: A Case Report

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Introduction

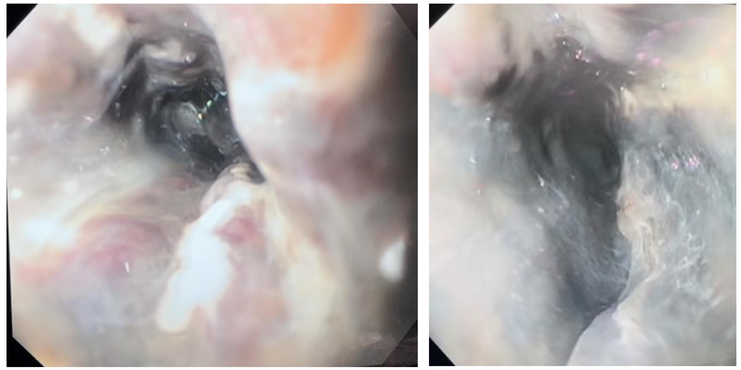
- Bevacizumab (Avastin) is a commonly used monoclonal antibody in chemotherapy agents for colorectal, ovarian, and lung cancers
- It has a reported side effect of spontaneous bowel perforation, which is still not entirely understood

Case Presentation

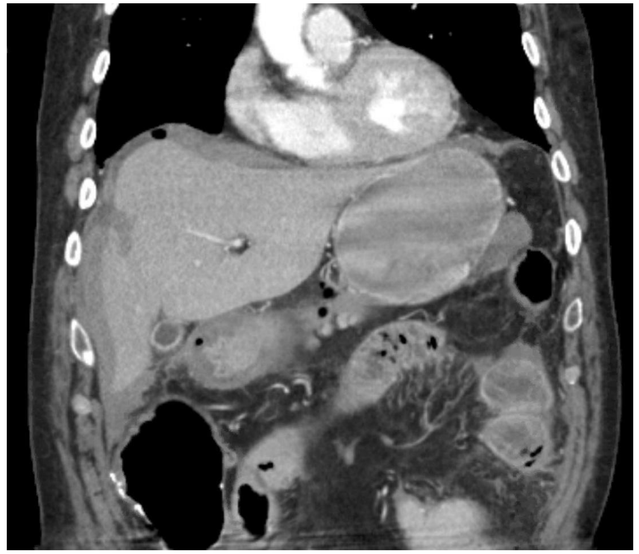
- 73-year-old male with stage IV sigmoid adenocarcinoma involving cecum, bladder, distal right ureter, and solitary liver metastasis
- Surgical resection [T4b N2b M1a, Stage IVA] complicated by anastomotic leak requiring transverse loop colostomy creation (November 2021)
- Adjuvant chemotherapy including bevacizumab (June, 2022)
- Colostomy reversal (September, 2022) complicated by duodenal and esophageal perforation

Hospital Course

- Hypotension on POD#5 with CT revealing diffuse esophageal thickening with concern for distal esophageal perforation
- EGD showing esophageal sloughing, mucosal necrosis, large duodenal ulceration
- Emergent exploratory laparotomy revealed 3 cm perforated ulcer at anterior first portion of duodenum requiring antrectomy
- Repeat EGD POD#1 showed dusky, necrotic-appearing esophagus circumferentially extending from cricopharyngeus to GEJ



EGD with dusky, necrotic-appearing esophagus



CT showing pneumoperitoneum around first portion of duodenum

Discussion

- Surgery is deferred 4-6 weeks after bevacizumab therapy to reduce complications of spontaneous bowel perforation
- Elective colostomy reversal was delayed 13 weeks in this patient
- Several cases of reported perforation have occurred years after surgery
- Ongoing inflammation can occur for years after surgery and may carry a substantial risk for perforation
- FDA Adverse Event Reporting System shows bevacizumab-related perforations most commonly to be gastrointestinal (30.7%)

Conclusions

- Spontaneous bowel perforation is a well-established side effect of bevacizumab
- It is less known that it can cause gastroesophageal perforations as well as delayed perforations of the GI tract outside of the expected window that has previously been described
- This case report stimulates ongoing discussions regarding known and potentially less known adverse effects of bevacizumab containing chemotherapy

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