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A patient with profound weight loss after gastric bypass surgery: A case report

Michael T Flannery

Abstract

Introduction: A case of profound weight loss after gastric bypass surgery with multiple negative evaluations.

Case presentation: A 41-year-old African-American female presented with greater-than-expected weight loss after gastric bypass and increasing abdominal pain over a 2-year period. An extensive workup was pursued for the patient with blood analysis, tumor markers, imaging studies both computed tomography and magnetic resonance imaging, arterial studies, and endoscopy from above and below, all of which demonstrated normal results. The patient was followed up without improvement, and repeated studies were also normal. The patient was labeled with a nonorganic etiology for her symptoms, which led to a psychiatry referral which was refused.

Conclusion: The patient's surgeon, who already had removed a normal appendix and gallbladder, repeated a laparoscopic exam. The exam was normal except for a small focus of pancreatic cancer in the celiac plexus. The patient died from perioperative sepsis from peritonitis 2 days after surgery. The case is discussed and findings reviewed.

Keywords

Pancreatic cancer, metastasis, abdominal pain, weight loss, cachexia

Introduction

This case represents a patient with massive weight loss of 300 lbs 2 years after gastric bypass surgery with associated nonspecific epigastric sharp abdominal pain. After 2 years of an extensive workup, she was labeled as a nonorganic case. Only after another laparoscopic exam was a small pancreatic cancer focus located in the celiac node.

Case presentation

A 41-year-old African-American female had no other abdominal complaints, including nausea/vomiting or change in stools. The patient denied fever or rigors. Her medical history was significant for a laparoscopic gastric bypass surgery 2 years previously with marked weight loss from roughly 400 to 102 lbs. Indications for the bypass surgery included morbid obesity, hypertension thought secondary to her obesity and mild restrictive lung disease. An extensive workup had been pursued to evaluate her pain both surgically and medically. The patient had undergone an appendectomy and a cholecystectomy, separately, without inflammatory signs, over 1 year prior to her admission, which demonstrated no pathology. The surgical service had labeled her pain as nonorganic in etiology. The patient's abdominal pain had originally began 2 weeks after her surgery and remained constant without change. The weight loss was gradual and smooth over the 2-year course. She denied prior abdominal pain in her history. There was a 40 pack year history of tobacco use previously. Constipation began 1 week prior to admission. Her exam showed an abdomen with multiple healed scars and mild diffuse pain without peritoneal signs. No lymph nodes were detected. She appeared emaciated with extensive skin flaps. The patient had multiple draws for tumor markers (including CA-19), computed tomography (CT) and magnetic resonance (MR) imaging of the abdomen and pelvis with and without contrast which were normal. It also included MR arterial and venous arteriography with negative results. She subsequently underwent full endoscopy from above (esophagogastroduodenoscopy (EGD), endoscopic retrograde cholangiopancreatography (ERCP) and endoscopic ultrasound (EUS)) and below (full colonoscopy) without abnormal findings. Visualization of the pancreas demonstrated no abnormal findings.

A CT of the chest was normal. Several pelvic exams with papanicolaou (PAP) smears were negative. There was no history of alcohol or illicit drug use and hepatitis B or C, and HIV studies were normal. Given her persistent pain, a

Department of Medicine, Morsani College of Medicine, University of South Florida, Tampa, FL, USA

Corresponding author:
Michael T Flannery, Department of Medicine, Morsani College of Medicine, University of South Florida, 12901 Bruce B. Downs Blvd., MDC 19 Room 1041L, Tampa, FL 33612, USA.
Email: Mflann5555@aol.com

capsule study of her small bowel was undertaken to rule out small bowel lymphoma or other pathology, though unlikely given the absence of malabsorption, which demonstrated no abnormal findings. Although some risk in capsule passage may occur in abnormal pathology states, the gastroenterologist felt comfortable having done several EGD/ERCP's on this patient. The only abnormalities from a laboratory standpoint were a mild leukocytosis 11.2×10^9/L and hypoalbuminemia with levels ranging from 30–40 g/L when hydrated. An erythrocyte sedimentation rate was normal. Other than her mildly decreased albumin, her corrected calcium, protime and cholesterol were all normal. Given her multiple prior admissions, the patient was treated conservatively with laxatives, opioids, and antidepressants without benefit according to the patient. At the time of our admission, her weight had stabilized and the above workup had been pursued over the prior 12 months.

Given her multiple admissions, benign abdomen and prior recent workups, we treated her with intravenous fluids, opioids and psychiatric evaluation, given her negative organic workup. There was no evidence for any infection, tumor or other inflammatory response. Her history of multiple follow-ups of tumor markers, endoscopy, CT and MR scanning and prior laparoscopic procedures without findings strongly suggested a nonorganic etiology. The team also did a courtesy consult with the surgeon who had performed her prior negative surgeries. After a long discussion with the patient and her family, the surgeon relented to our surprise and scheduled the patient for laparoscopic evaluation of the abdomen and pelvis. The exam was visually normal with adhesions, however, multiple biopsies were randomly requested of normal-appearing tissue which included liver/spleen, mesentery and any localized lymph nodes. All frozen sections were negative except for a small focus of exocrine pancreatic adenocarcinoma in her celiac node based on immunohistology evaluation. Upon review of all prior studies, there was no evidence of tumor by markers and visualization, directly and indirectly. We were unsure whether this small focus could be causing that much sympathetic pain along with progressive cachexia. However, given the close proximity to the sympathetic plexus, this is certainly possible.

Two days after her surgery, she developed suppurative peritonitis with multiorgan failure and died. Postoperative cultures of the blood and abdomen were negative. Since this was a complicated case and a couple of family members worked at the hospital, the team arranged a discussion explaining the difficulty in located small metastatic foci even with our current technology. An autopsy was not performed at the family's request.

Discussion

Similar to other cases I have seen during my practice, there was the occasional small metastatic focus with a nondetectable cancer at the primary site seen on pathologic analysis. Many consider intra-abdominal organs such as gastric, small bowel, cholangiographic and pancreatic in these situations. Certainly, we have learned that evaluating metastatic adenocarcinoma of unknown primary does not result in improved patient outcomes. While EUS has a very high sensitivity and specificity,[1] it was normal in this case. While it may have been interesting to see a positron emission tomography (PET) examination which may have a higher sensitivity[2] compared with EUS but not so with tumors <1 cm in size.

Risk factors for pancreatic carcinoma include obesity, increasing age, chronic pancreatitis, *Helicobacter pylori* and familial polyposis. Our patient's main risk factors were tobacco use and obesity. Prior studies have shown that there is nearly a 50% risk in the risk of developing pancreatic cancer within 2 years of quitting tobacco consumption.[3] Although pancreatic cancer accounts for only 2% of new cancer diagnosis in the United States, it is the fourth leading cause of death from cancer. The overall 5-year survival rate is <5%.[1] Our patient presented with weight loss beyond that expected from her gastric bypass surgery, which is normally 100–150 lbs over 2 years. Even for patients with direct involvement of the pancreatic head or tail, abdominal pain and weight loss are the top three symptoms. There has been at least one prior case of a pancreatic tumor after gastric bypass, which was an insulinoma.[4]

Although she died from perioperative sepsis before further treatment could be initiated, we would have continued pain control, an antidepressant and a bowel regimen to avoid constipation. We could also have offered the use of gemcitabine which stabilizes pain and weight and improves performance status. There is also a 12-month survival advantage compared with fluorouracil monotherapy.[1,5] Another therapeutic option is a combination of 5-fluorouracil combined with oxaliplatin and irinotecan. This offers a brief, 3 months on average, survival benefit but is associated with increased toxicity.[6] Given her celiac plexus pain, a neurolytic block could have been offered which may result in up to 85% of good pain relief.[7]

It is likely the tumor had been present for some time and the patient's pain and cachexia may be directly related to invasion of the sympathetic plexus or indirectly related due to neuro-hormonal release. A key finding other than her pain was the rapid degree of weight loss in making her physicians' suspicious for another cause.

The key danger was that this patient had already been labeled as nonorganic. Despite her prior extensive workup, it is still important to keep cancer in your differential diagnosis despite the evidence to date at that time. Perhaps another laparoscopic surgery, but she just had her appendix and gallbladder out in the year or two before admission and nothing else was noted. Ultimately, the current laparoscopic exam was reported normal, however, random biopsies of normal-appearing tissue gave a likely source. An autopsy may have shown a microscopic focal area of pancreatic cancer on cuts

with a macro-metastasis in her celiac node. The family, however, refused an autopsy even one limited to the abdomen.

Conclusion

Patients rarely present with such an aggressive course of weight loss after gastric bypass surgery. There are no evidence-based guidelines that suggest repetitive evaluations as seen in our case. While there are many reported cases of unknown primary carcinoma, there are situations where the metastasis is the main focus and the primary is unseen with current medical technology. This is the feature of our case in the setting of significant weight loss after gastric surgery, which confused the diagnostic workup and lengthened her time to diagnosis. While a small site of metastasis was seen in the celiac node, no other abnormalities were seen, and all other biopsies where normal. Although the patient died from perioperative sepsis and no autopsy was done, it may be possible, based on pathologic interpretation, that the primary source may have been seen in the pancreatic sections. The physician must always keep in mind a new process development despite a history of negative workups and a labeling as nonorganic in etiology.

Consent

Written consent could not be obtained from the patient as she is deceased as noted in the case report. A search for family members, for consent, after several years, yielded no results.

Declaration of conflicting interests

The author declares that there is no conflict of interest.

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