A rare case of epigastric pain caused by duodenal metastatic cervical cancer

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Introduction:

- Cervical cancer was previously one of the most common causes of death for women in the United States but survival has since dramatically improved with the use of aggressive screening with Papanicolaou Testing and the advent of the HPV vaccine.
- Metastatic cervical cancer spread to the duodenum is extremely rare and often presents a diagnostic challenge due to the vague nature of early symptoms.
- We present a case epigastric pain caused by invasive squamous cell cervical cancer with duodenal metastasis.

Case Presentation:

- A 59-year-old female with a history of GERD and cervical cancer status post surgical resection, chemotherapy and external radiation therapy (2 years prior) and currently on pembrolizumab presented to clinic for 3-4 months of progressive upper abdominal pain and uncontrolled dyspepsia. This pain was associated with an unintentional 35lb weight loss the preceding year, worsening anemia, and post prandial fullness. Last upper endoscopy a year ago was without abnormalities.
- Physical exam was notable for mild epigastric tenderness to deep palpation without guarding. Laboratory data was remarkable for downtrending hemoglobin (13.3 g/dL down to 9.9g/dL), normal liver function tests, normal lipase, and negative stool H pylori antigen. She was referred for colonoscopy and esophagogastroduodenoscopy (EGD/upper endoscopy).
- A contrasted CT of the abdomen and pelvis performed revealed multiple enlarged lymph nodes of the mesentery. Further diagnostic workup included a colonoscopy which was remarkable for pancolonic diverticulosis and a 5mm tubular adenoma. Upper endoscopy was performed revealing thickened folds of the second portion of the duodenum and multiple biopsies taken of this site. It was an otherwise normal upper endoscopy. The duodenal biopsies were positive for metastatic squamous cancer of the cervix.
- The patient was transitioned to treatment with gemcitabine and carboplatin due to progressive disease on pembrolizumab. She unfortunately succumbed to her disease six months after discovering the duodenal metastases due to refractory disease in the setting of functional decline, decreasing oral intake due to intolerable gastrointestinal symptoms, and worsening disease burden.

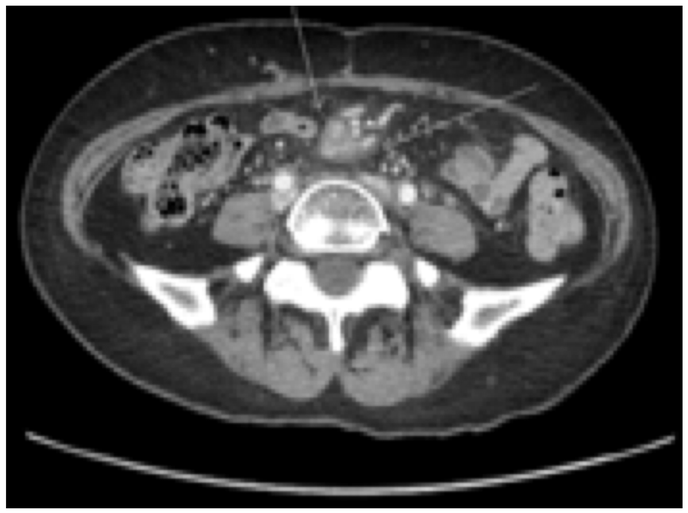

Figure 1.
CT abdomen and pelvis w/ contrast: increased mesenteric adenopathy with enlargement of multiple lymph nodes at the root of the mesentery

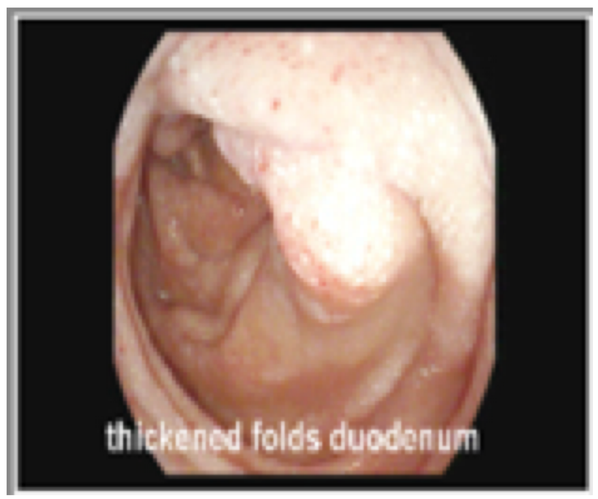

Figure 2.
EGD. Luminal exam of duodenal folds in the second portion of duodenum

Discussion:

- There is an estimated 7.5 per 100000 new cases of cervical cancer per year with death rate of 2.2 per 100,000 in the United States (1). Cervical cancer is usually locally invasive and spreads by lymphatics or hematogenously with most common metastatic sites of lungs, liver, and bone (2).
- In review of 1347 patients using SEER database, Zhou et al showed that liver metastases was in up to 12.5% of patients but did not mention a single case of luminal disease (2). It is very rare for most cancers to metastasize to the gastrointestinal tract, but when present, metastasis has a predilection for the stomach and duodenum (3).
- Few case reports are available for cervical cancer metastasis to the GI tract specifically, with about 16 identified. These patients generally presented with gastrointestinal bleeding, bowel perforation, nonspecific abdominal pain or obstructive symptoms (4). In another case report, by Elkhatib et al, the patient presented with epigastric and nausea several years after cervical cancer diagnosis and treatment (5).

Conclusion:

- In conclusion, duodenal metastasis of squamous cell cervical cancer is extremely rare and can be frequently missed.
- A high degree of suspicion by clinicians can expedite referral for upper endoscopy with biopsies to secure the diagnosis and allow for treatment to extend patients' quality of life and avoid morbidity and mortality associated with this unlikely malignant luminal invasion.

References:
1. Seer.cancer.gov/statfacts/html/cervix.html
2. Zhou S, Peng F. Patterns of metastases in cervical cancer: a population-based study. Int J Clin Exp Pathol. 2020 Jul 1;13(7):1615-1623. PMID: 32782680; PMCID: PMC7414489.
3. Wei SC, Su WC, Chang MC, Chang YT, Wang CY, Wong JM. Incidence, endoscopic morphology and distribution of metastatic lesions in the gastrointestinal tract. J Gastroenterol Hepatol. 2007 Jun;22(6):827-31. doi: 10.1111/j.1440-1746.2006.04532.x. PMID: 17565636.
4.Ash J, Tsai A. Metastatic Cervical Cancer to the Duodenum: A Learning Point. Cureus. 2021 Mar 14;13(3):e13874. doi: 10.7759/cureus.13874. PMID: 33868838; PMCID: PMC8042662.
5. Elkhatib I, Savides T, Fehmi A. Duodenal metastasis of cervical adenosquamous carcinoma. Clin Gastroenterol Hepatol. 2012 Jul;10(7):A34. doi: 10.1016/j.cgh.2012.02.020. Epub 2012 Mar 2. PMID: 22387251.