KIRK KERKORIAN SCHOOL OF MEDICINE

UNLV

Duodenal Obstruction Secondary to Metastatic Urothelial Carcinoma: A Novel Presentation of a Common Malignancy

ACG 2022

Zahra Dossaji D.O.[1], Kyaw Min Tun D.O.[1], Jose Aponte-Pieras M.D.[2], Muhammad Farooqui M.D.[2], Gordon Ohning M.D., Ph.D[2]

[1] Department of Internal Medicine, Kirk Kerkorian School of Medicine at the University of Nevada, Las Vegas
[2] Department of Gastroenterology and Hepatology, Kirk Kerkorian School of Medicine at the University of Nevada, Las Vegas

Introduction

- Urothelial carcinoma, also known as transitional cell carcinoma (TCC), is the most common urological malignancy
- **TCC** commonly spreads to the pelvic lymph nodes, lung, bone and liver and **rarely metastasizes to the gastrointestinal tract**.
- Only a few cases of duodenal obstruction secondary to metastatic TCC have been reported to date.
- Herein we report a case of a **patient with a recently diagnosed right renal mass presenting with intractable nausea and vomiting secondary to duodenal obstruction from local metastasis of TCC**.

Case Presentation

- An 80-year female diagnosed with right renal mass on CT scan 2 months prior presented with **nausea, vomiting, diarrhea and 15-pound weight loss.**
- CT of the abdomen without contrast revealed an **ill-defined renal mass** with extension into the **perinephric soft tissues** and multiple low-attenuation **lesions in the liver** concerning for metastasis.
- The visualized portion of the **small bowel on the CT was unremarkable.**
- A **liver biopsy** of the mass revealed metastatic TCC with immunohistochemical stains positive for CK 7, CK 20 and GATA-3 **suggestive of TCC.**
- Gastroenterology team was consulted for intractable nausea and vomiting.
- An upper endoscopy revealed duodenopathy with friable tissue and mottling in the second portion of the duodenum. A **severe luminal stenosis** prevented further endoscope advancement.
- **Duodenal mucosa biopsies revealed findings consistent with TCC.**
- Patient underwent placement of **palliative Gastrojejunal metal stent** for symptomatic relief. Patient tolerated diet following procedure and was discharged home.

Case

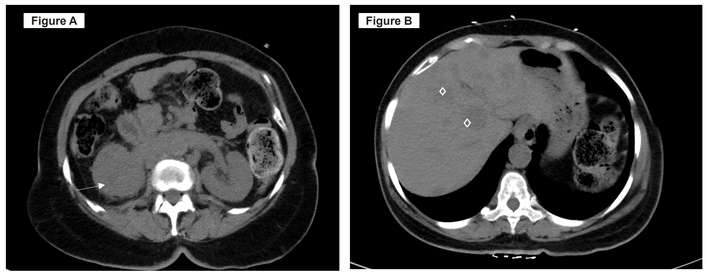

Figure A: CT Abdomen w/o contrast with arrow pointing to right renal mass with extension into perinephric soft tissue
Figure B: CT Abdomen w/o contrast with diamonds pointing to multiple low-attenuation hepatic lesions concerning for metastatic disease

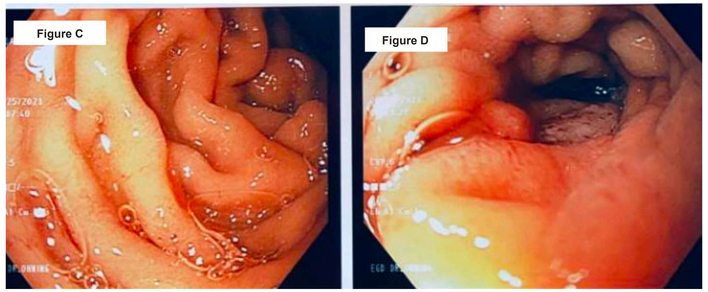

Figure C and D: Duodenopathy with friable tissue noted on Endoscopy in the second portion of the duodenum

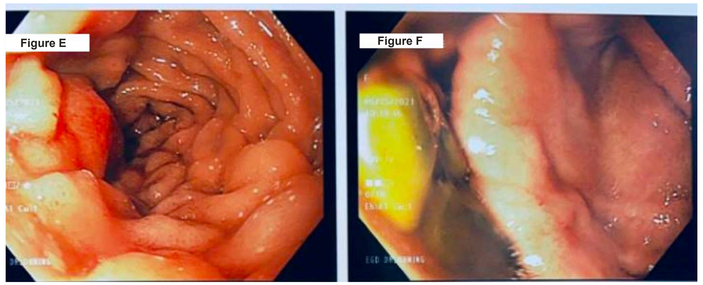

Figure E and F: Severe luminal stenosis noted on Endoscopy

Discussion

- Metastatic tumor can involve the small bowel via intraperitoneal spread (most common), hematogenous dissemination or lymphatic channels. **It is suspected that our patient had small bowel involvement via intraperitoneal spread as the right renal mass extended into the retroperitoneum.**
- **Malignant duodenal obstructions are not always identified on imaging** and can be difficult to diagnose unless patients are symptomatic.
- In our case, persistent nausea and vomiting was attributed to generalized malaise from her known malignancy, and duodenal obstruction was only identified following endoscopy.
- Duodenal obstructions due to malignancies are generally treated with either surgical bypassing, colostomy, or stent placement, with stent placement being the least invasive option. However, these interventions are only palliative, and the diagnosis confers a poor prognosis.

Conclusion

- This case demonstrates a novel presentation of a common malignancy.
- Clinicians should be aware that **metastatic TCC can present as duodenal obstruction in the setting of nausea and vomiting despite unremarkable small bowel radiologic findings**
- We aim to provide further knowledge and clinical experience regarding duodenal obstruction secondary to TCC for early identification and management.

References

1. Takashi Ando, et al. Duodenal and rectal obstructions due to urothelial cancer infiltration from recurrent renal pelvic cancer in the bladder wall: An autopsy case. Urology Case Reports, https://doi.org/10.1016/j.eucr.2019.100903.
2. Hawtin K, Kent A, Collins C, Blunt D. Metastatic bladder cancer presenting as duodenal obstruction. Ann Acad Med Singap. 2009 Oct;38(10):914-2. PMID: 19890586.
3. Brustmann H. Plasmacytoid Urothelial Carcinoma of the Urinary Bladder Metastatic to the Duodenum: A Case Report-Diagnostic Relevance of GATA3 Immunohistochemistry. Case Rep Pathol. 2017;2017:5209059. doi: 10.1155/2017/5209059. Epub 2017 Jan 31. PMID: 28255490; PMCID: PMC5306993.