

Images in medicine

Duodenal obstruction in a patient with ureteral cancer

Obstrucción duodenal en una paciente con cáncer ureteral

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An 84-year-old woman was admitted to a urology hospital with hematuria. High-grade ureteral cancer was diagnosed. She received best supportive care because of complications, including hemiplegia due to cerebral infarction, atrial fibrillation, pacemaker placement, rheumatoid arthritis, and dementia. She was transferred to our hospital because of anorexia and weight loss. On Day 41 in our hospital, she suddenly vomited repeatedly. X-ray revealed dilatation of the stomach (Fig. 1). A diatrizoate study revealed obstruction in the transverse part of the duodenum. Single balloon endoscopy revealed normal mucosa at the obstruction. CT shows the duodenum sandwiched between the aorta and superior mesenteric artery, just before a mass showing marginal enhancement and a similar mass in the ureter. The patient died on Day 90. Autopsy revealed that cancer cells had metastasized to pancreas, duodenum, and ascending colon (Fig. 2). Immunohistochemical examination revealed cancer cells positive for p53, GATA3, CD44, cytokeratin-5/6, and high-molecular-weight-keratin, but not for cytokeratin-20, indicating basal-type urothelial carcinoma.

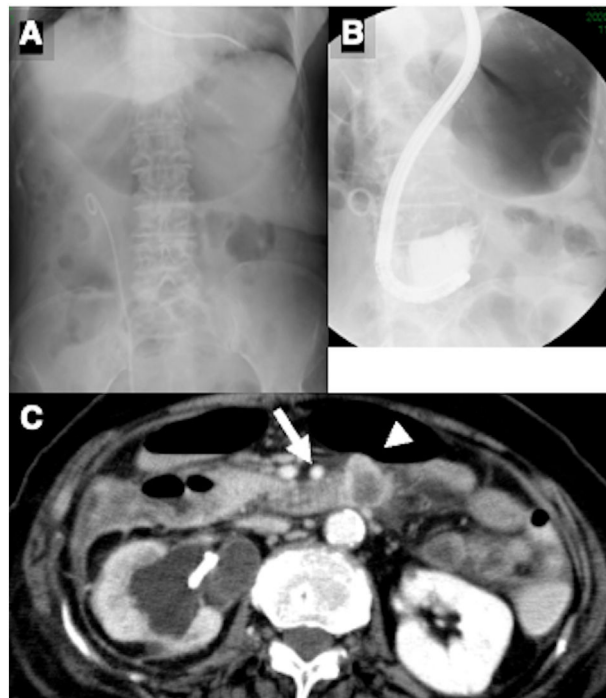


Fig. 1. (A) X-ray shows double bubbles which are dilatation of the stomach and duodenum. She was also treated with pacemaker placement and a ureteral stent. (B) Single balloon endoscopy revealed normal mucosa at the obstruction. Neither diatrizoate nor the catheter from single balloon endoscopy could pass through the obstruction. (C) Contrast-enhanced computed tomography shows the obstructed duodenum sandwiched between the aorta and superior mesenteric artery (arrow) and a mass showing marginal enhancement (arrowhead).

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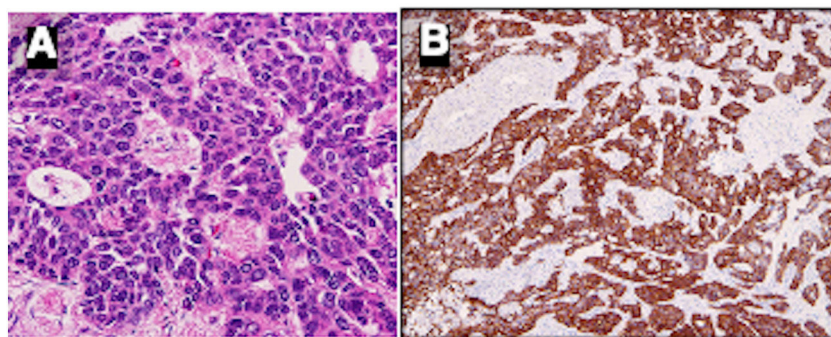


Fig. 2. (A) Histological examination at autopsy reveals ureteral cancer cells in the intestine. (B) Immunohistochemical examination shows tumor cells were positive for high-molecular-weight-keratin.

Duodenal obstruction from ureteral cancer is rare. Basal-type urothelial carcinoma affects far fewer patients (about one-quarter the number) than luminal-type, but is more aggressive and more invasive, so cancer cells might metastasize to the duodenum. Marginally enhanced mass may be characteristic of ureteral cancer metastasis.

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Contributors

All authors wrote and reviewed the manuscript. TK and YA treated the patient. YI performed autopsy and histological examination. TE supervised this study. All authors approved the final version of the manuscript. Written consent has been obtained from the patient's relatives.

Declaration of Competing Interest

We declare no competing interests.

Informed consent was obtained from the patient's relatives for the publication of their information and imaging.