

Gastrointestinal bleeding as a manifestation of metastatic kidney cancer[☆]



Sangrado de tubo digestivo como manifestación de carcinoma renal metastásico

A 68-year-old man had a past medical history of ischemic heart disease and vascular stent placement for the past 3 years. Four years ago, he was diagnosed with clinical stage IV kidney cancer, with metastasis to the left lower pulmonary lobe. He underwent left total nephrectomy, with pulmonary lobectomy, received chemotherapy based on sorafenib, and had remained in remission. However, he provided us with a report of a positron emission tomography-computed tomography (PET-CT) scan, taken 4 months prior to our intervention, that showed 2 new hypermetabolic liver masses, suggestive of metastatic activity, with no signs of tumors in other organs.

His current illness began 10 months earlier, manifesting as abdominal discomfort, accompanied by melena, alternating with hematochezia, at least once a week, but his hemoglobin level was reported as 14 g/l during that period, with no hemodynamic repercussions. He had a cardiology consultation, at which the anticoagulant regimen was modified, starting a daily dose of 15 mg of rivaroxaban. Two weeks after that treatment, the patient reported epigastralgia, with a sensation of immediate postprandial fullness that limited his breathing. He also presented with melena and hematochezia 2 to 3 times a week, as well as asthenia and adynamia.

The patient then had a gastroenterology consultation, at which a hemogram was ordered, reporting hemoglobin 9.1 g/dl, MCV 80.1 fl, and MCH 24.5 pg. Given that he presented with signs of dyspepsia and gastrointestinal bleeding, the decision to perform esophagogastroduodenoscopy was made, suspending the rivaroxaban 48 h prior to the intervention, finding no alterations. Continuing with the diagnostic approach, colonoscopy was performed, revealing a lesion of probable epithelial origin, at the site at which the descending colon transitions into the sigmoid colon, that protruded into the intestinal lumen, forming a pseudopolyp with an adherent clot and bleeding layer, and a distorted mucosal and vascular pattern, for which tissue samples were taken from the vertex of the lesion, with the double-bite biopsy technique (Fig. 1). That was done to have an early diagnosis, despite the evidence of recent hemorrhage.

The next day, the patient had no signs of active bleeding and abdominal CT scans, with and without oral contrast, showed the surgical absence of the left kidney. The renal fossa was occupied by a 68 × 94 × 56 mm tumor that infiltrated the wall of the colon, under the splenic angle, reducing the intestinal lumen. The image suggested invasion into a surrounding segment of the jejunum, as well as a tumor that was retroperitoneal in relation to the suprapan-

creatic lymph nodes, indicative of metastatic activity, that invaded the lesser curvature of the stomach (Fig. 2). The histopathologic report revealed the presence of ulcerated, metastatic clear cell renal cell carcinoma, with the presence of newly formed vessels and an inflammatory infiltrate with a predominance of macrophages.

Clear cell renal cell carcinoma is the ninth most frequent cancer in men, and the fourteenth, in women. Nevertheless, it is the most lethal urologic malignancy in the world.¹ Its incidence is currently on the rise in developed countries, albeit the mortality rate is going down, mainly due to the introduction of targeted therapies with tyrosine-kinase inhibitors and mammalian target of rapamycin (mTOR) antagonists.² For 2018, incidence in Mexico was calculated at 3.5 cases per 100,000 inhabitants.³ Management of stage IV disease should include systemic therapy, plus partial and/or total nephrectomy, as well as metastasectomy or ablative therapies, together with active follow-up that includes medical examination, laboratory studies, baseline abdomen and chest CT, at 6 months and then every year.⁴

Close to 30% of the patients that undergo partial or radical nephrectomy, can develop metastasis during the 5-year follow-up period. If it occurs within the first year of follow-up, it is considered early. Late metastasis is considered that which occurs after the first year. Early metastasis has a worse outcome and metastasectomy and/or ablative therapy is recommended.⁵ Metastases to the colon are extremely rare, occurring in 1% of all neoplasms developed at the colorectal level. The incidence of metastasis to the colon primarily occurs in breast cancer (3-12%), prostate cancer (1-12%), lung cancer (6%), melanoma (< 7%), and kidney cancer (< 10%). The metastases are generally multiple lesions arising from local, lymphatic, or hematogenous extensions or distant implants.⁶

The clinical picture of metastatic clear cell renal cell carcinoma to the colon is non-specific and can present as lower gastrointestinal bleeding, anemia, mechanical obstruction or intussusception, abdominal pain, and weight loss. However, an asymptomatic course is not unusual, and cases are often only documented at necropsy. In tomographic studies, the lesions are viewed as intraluminal polypoid masses, exophytic masses, and intestinal wall thinning.⁷ Renal metastases to the gastrointestinal tract after nephrectomy are extremely rare. Vo et al. conducted a literature review of articles published from 1991 to 2016, finding only 9 cases. They added one case seen by their working group – a patient with a solitary metastasis to the colon, five years after nephrectomy, that presented with abdominal pain and hematochezia, similar to the case of our patient.⁸

The present clinical case is illustrative, especially because it reminds us that all patients with a history of any primary tumor, that have the onset of digestive symptomatology, should be approached comprehensively, i.e., clinically, endoscopically, and when necessary, radiologically.

The initial therapeutic approach to lower gastrointestinal bleeding must ensure the adequate hemodynamic status of the patient. Once the patient is stable, endoscopic study is recommended, to determine the origin of the bleeding. In the present case, a lesion of probable subepithelial origin was found. When that type of lesion is encountered, determining its extension is vitally important, and if possible,

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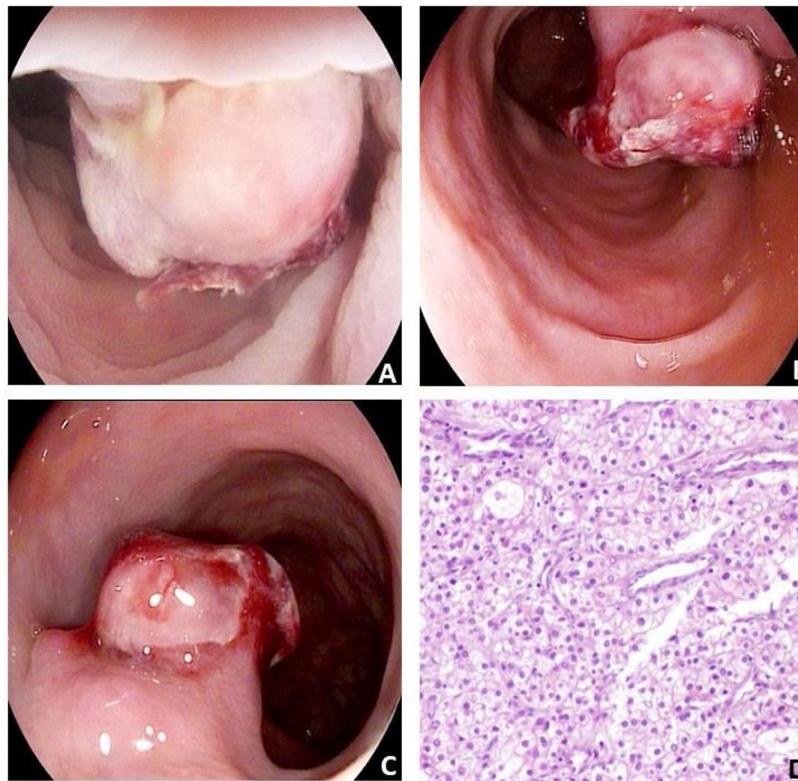


Figure 1 Endoscopic image, with the water immersion technique, of the descending colon, showing: A) A pseudopolyp of probable subepithelial origin, protruding into the intestinal lumen, with an adherent clot and a bleeding layer, with a distorted mucosal and vascular pattern. B) Tissue was extracted from the vertex of the lesion, using the double-bite biopsy technique. C) A re-bleeding layer after biopsy. D) Histopathologic study: malignant epithelial neoplasm composed of cells with clear cytoplasm and prominent membranes, irregular nuclei with prominent nucleoli, corresponding to histologic grade 3 of the WHO/ISUP (H&E $\times 10$).

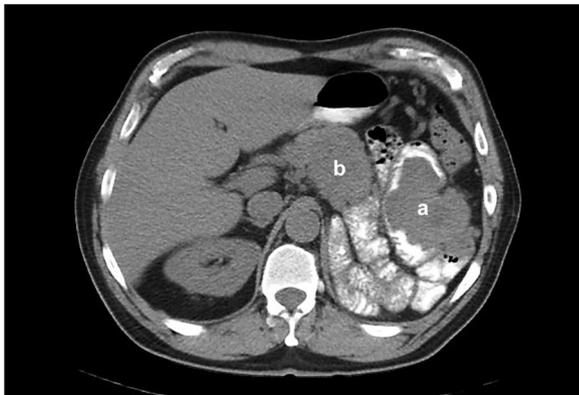


Figure 2 Axial view of the abdominal CT with oral contrast showing the left renal fossa occupied by small bowel segments (a), as well as a hyperdense lesion, infiltrating the intestinal segments and gastric wall (b).

should be done through endoscopic ultrasound-guided fine needle biopsy. If not possible, alternatives with other imaging techniques, such as tomography, should be carried out.⁹ Metastatic lesions in the gastrointestinal tract that cause bleeding can be treated through cautery, argon plasma coagulation, hemoclip placement, local epinephrine injection, or hemostatic powder application.¹⁰ Nevertheless, definitive treatment is determined by tumor extension and invasion.

Ethical considerations

Informed consent was requested from the patient to receive treatment or participate in the study described. This article contains no information that could identify the patient.

The present article meets the current bioethical research regulations in Mexico.

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Conflict of interest

The authors declare that there is no conflict of interest.

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A complication of endoscopic closure of a duodenal perforation with the OVESCO system[☆]



Una complicación del cierre endoscópico de perforación duodenal con sistema OVESCO

Gastrointestinal perforations are one of the most frequent surgical emergencies. They can be produced by endoluminal disease, foreign bodies, or by an iatrogenic event. Even though surgery continues to be the standard treatment of gastrointestinal perforations, the increase in both diagnostic and therapeutic endoscopic procedures has led to the development of new systems for attempting endoscopic closure of small perforations. The OVESCO system is one of the most widely used and consists of a preinstalled clip of biocompatible material that brings together, compresses, and closes the edges of perforations measuring up to 3 cm.¹

We describe herein a case, in which, after attempting the closure of an iatrogenic duodenal perforation produced during a diagnostic endoscopic ultrasound (EUS), utilizing the OVESCO system, an endoscopic instrument became trapped.

A 73-year-old woman with an unremarkable past medical history, underwent EUS due to suspicion of a lesion in the head of the pancreas. During the procedure, the linear echoendoscope was introduced into the second part of the duodenum and in the course of its withdrawal, a circular perforation, measuring approximately 1.5 cm, was detected at the lateral surface of the second part of the duodenum. Given that finding, a conventional endoscope was then introduced, and after CO₂ insufflation, an OVESCO device was placed to close the perforation, trapping the endoscopic forceps inside it, making it impossible to be moved or removed.

The patient underwent emergency surgery. An approximately 2 cm perforation in the posterior wall of the duodenum was partially occluded by the OVESCO, with an endoscopic forceps trapped in the occlusion and coming out through the duodenal wall (Fig. 1). A wide Kocher maneuver was performed, along with duodenotomy to extract the forceps (Fig. 2), and single-layer closure of the perforation with omentoplasty was carried out. A feeding jejunostomy was placed. The patient progressed favorably, resuming oral diet with good tolerance, and was released on postoperative day 14.

Complications associated with EUS vary from 0.04 to 0.6%, and include infections, bleeding, pancreatitis, perforations, and sedation-related events. In the hands of an expert operator, the prevalence of complications is similar to that of conventional upper gastrointestinal endoscopy (0.1-0.5%).² The incidence of gastrointestinal perforation during EUS varies from 0 to 0.4%, and is the most serious complication, with high morbidity and mortality (16–18%).^{3,4} Esophageal perforation is the most frequent perforation associated with EUS, performed with a radial echoendoscope. However, the duodenum is the most susceptible site



Figure 1 Duodenal perforation partially closed by the OVESCO system, and the trapped endoscopic forceps.

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