



Gastric Metastasis of Renal Cell Carcinoma Presenting as Polyps

Gulhan Kanat Unler¹, Gulsum Teke Ozgur², Huseyin Savas Gokturk^{1*},
Ozgur Hilal Erinanc³ and Oznur Kal⁴

¹Department of Gastroenterology, Faculty of Medicine, Baskent University, Konya, Turkey.

²Department of Family Medicine, Faculty of Medicine, Baskent University, Konya, Turkey.

³Department of Pathology, Faculty of Medicine, Baskent University, Konya, Turkey.

⁴Department of Nephrology, Faculty of Medicine, Baskent University, Konya, Turkey.

Authors' contributions

This work was carried out in collaboration between all authors. Author GKU designed the study and wrote the first draft of the manuscript. Author HSG managed the literature searches, analyses of the study performed the spectroscopy analysis. All authors read and approved the final manuscript.

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Case Study

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ABSTRACT

Metastatic tumors of the stomach are very rare, with an incidence of 0, 2%- 0, 7% in the autopsy series. Malignant melanoma, carcinomas of breast, esophagus and lung are the most frequent primary tumor sites. The present case describes a 57-year-old woman who presented to the gastroenterology department with epigastric pain, nausea and vomiting for two months. Examinations revealed gastric metastasis of Renal Cell Carcinoma.

Keywords: Renal cell carcinoma; metastasis; stomach; upper endoscopy; kidney.

1. INTRODUCTION

The presence of metastasis in the stomach is a rare condition with an incidence of 0, 2%-0, 7% in the autopsy series. Most frequently described primary sites that lead to gastric metastases include skin (malignant melanoma), breast, esophagus and lung [1]. Renal Cell Carcinomas originate within the renal cortex and constitute 80 to 85 percent of primary renal neoplasms. Renal Cell Carcinoma can present with a range of sign and symptoms and at presentation, approximately 25 percent of individuals either have distant metastases or advanced locoregional disease [2].

2. CASE REPORT

A 57-year-old woman was admitted to the hospital complaining of epigastric pain, nausea and vomiting for two months. The patient had a history of right radical nephrectomy for renal cell

carcinoma seven years ago. She continued on hemodialysis three times per week because of her atrophic left kidney. The upper endoscopy revealed multiple polypoid masses (2 to 4 cm in diameter) with ulcerations at the corpus of the stomach (Fig. 1). Microscopic examination of the biopsies revealed nodular and nested collections of epithelioid clear cells invading lamina propria. Tumor cells showed clear cytoplasm, round to ovoid nuclei with finely granular open chromatin and small, inconspicuous nucleoli. Tumor cells were immunoreactive with antibodies raised against Vimentin and Pancytokeratin. The histomorphologic features and the immunophenotype resulted in a diagnosis of metastatic Renal Cell Carcinoma (Figs. 2 and 3). Abdominal and thoracic computed tomography scan revealed multiple metastatic lesions on both lungs. Our patient refused any further treatment procedure and the palliative treatment was performed. The patient died 2 months after the gastric endoscopy.



Fig. 1. Multiple, polypoid masses in the corpus of stomach

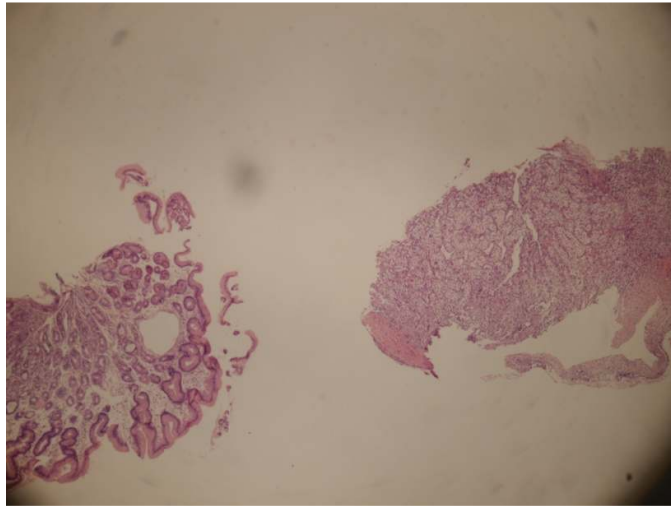


Fig. 2. Biopsies from metastatic mucosa (left) and normal gastric mucosa (right) (H&E, 10X)

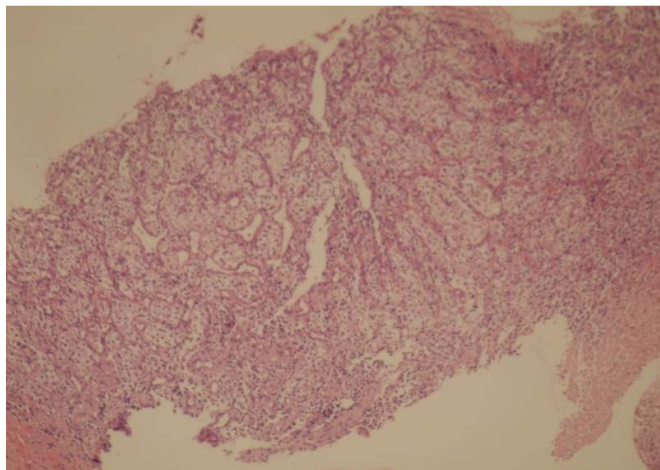
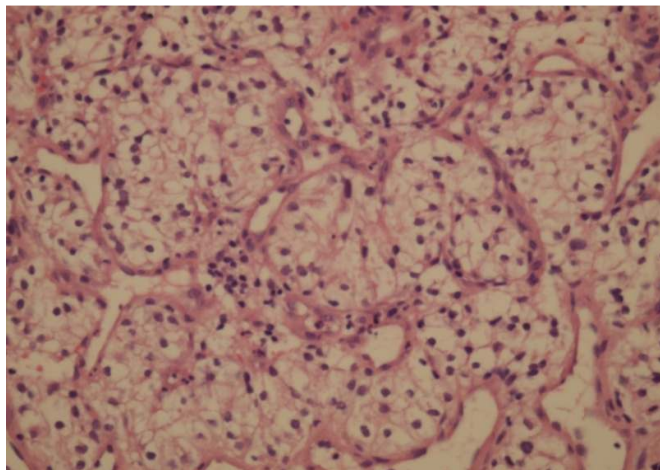


Fig. 3. Submucosal nodular collections of epithelioid clear cells, typical histologic characteristics of RCC in gastric mucosa (H&E, original magnification 100X and 40X)

3. DISCUSSION

RCC frequently metastasizes to distant organs such as lungs, bones, brain, liver and lymph nodes. However, gastric metastasis from RCC is extremely rare with only 44 cases in the literature reviewed by Herculano et al. [3]. Gastric metastasis from RCC may be a slow process. The mean period from diagnosis of RCC to diagnosis of metastasis is nearly 7 years (0-23 years) and the majority of gastric metastases from RCCs occurred among male patients [4]. Our patient also had a history of nephrectomy seven years ago. An isolated gastric metastasis from RCC was reported even 20 years after radical nephrectomy, suggesting RCC has the potential for late solitary metastasis [5]. The most common symptoms and signs include gastrointestinal bleeding (melena or hematemesis), epigastric pain, anemia from occult blood loss, nausea and vomiting. Our patient presented with epigastric pain, nausea and vomiting. Gastric metastases are more common in the body (63%), and may presents as polypoid [a large solitary mass or multiple small polyps) or ulcerated lesions resembling primary gastric cancer endoscopically [6,7]. The present patient had multiple, polypoid masses with various diameters in the gastric body (Fig. 3).

Gastric metastasis is usually associated with advanced disease due to concomitant presence of metastases in other organs. The possibility for gastric metastasis even many years after diagnosis and treatment of RCC is crucial, particularly in patients with gastrointestinal symptoms. Several therapeutic approaches for gastric metastasis from RCC can be considered however since the survival period is extremely short the optimal treatment remains controversial. Total or subtotal gastrectomy, surgical or endoscopic polypectomy, chemotherapy with systemic or targeted drugs is available [8-10].

4. CONCLUSION

Gastric metastases from RCC are rare conditions with less than 50 cases described in the literature. Patients with RCC who undergo nephrectomy should be carefully followed up since early treatment of RCC metastases to distant organs play vital role for patient survival. These cases emphasize the need for careful long-term follow-up and endoscopy can have an important role in the diagnosis particularly in patients with gastrointestinal

symptoms. However, the optimal treatment for RCC gastric metastasis remains unclear.

CONSENT

All authors declare that written informed consent was obtained from the patient for publication of this case report and accompanying images. Consent from the patient was obtained using the SDI Patient Consent Form 1.0.

ETHICAL APPROVAL

It is not applicable.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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