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Ileal metastasis of renal cell carcinoma

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Abstract

The aim of our article is to present a rare case of ileal metastasis of renal cell carcinoma. Renal cell carcinoma (RCC) constitutes 3% of all adult malignancies and often presents insidiously. Consequently 25-30% of patients have metastasis at the time of diagnosis. Many patients of RCC will develop metastasis to lungs, bone, liver, adrenal glands and brain. Incidence of small bowel metastasis from renal tumors ranges from 3.0% -14.6% of all metastatic small bowel tumors.

Key Words: Ileum, metastasis, renal cell carcinoma.

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INTRODUCTION

Renal cell carcinoma (RCC) constitutes 3% of all adult malignancies and often presents insidiously. Consequently 25-30% of patients have metastasis at the time of diagnosis [1]. RCC is characterized by many manifestations; including unusual metastatic sites and paraneoplastic syndromes [2]. Many patients of RCC will develop metastasis to lungs, bone, liver, adrenal glands and brain.

However intestinal metastasis is rare and usually occurs when there is widespread dissemination of the tumor. Incidence of small bowel metastasis from renal tumors ranges from 3.0% - 14.6% of all metastatic small bowel tumors [3].

CASE PRESENTATION

A 41 year old male presented with a 2 day history of colicky abdominal pain associated with vomiting, loss of appetite and weakness. The patient had a history of undergoing a right nephrectomy for RCC two years back and after two months of nephrectomy he had developed metastasis to left humerus.

Ultrasonography of abdomen was performed and it showed multiple liver metastasis. Exploratory laparotomy was performed and perforation of ileum was noted. The perforated part of ileum was excised and sent for histopathological study.

PATHOLOGY

Surgical specimen consisted of single tissue bit measuring 2.5x2 cms which was pale white to yellow in colour. Microscopy showed a tumor tissue in the ileal submucosa which was composed of clear cells arranged in acinar and solid patterns. Tumor cells were separated by fibrovascular septae and had clear cytoplasm and mild nuclear pleomorphism. Based on these microscopic findings and past clinical history a diagnosis of intestinal metastatic renal cell carcinoma was made.

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DISCUSSION

The gastrointestinal tract metastasis from RCC is rare, but literature review indicates that RCC can metastasize to the whole gastrointestinal tract, from oesophagus to rectum. Autopsy data indicate that RCC metastases account for 7.1% of metastatic tumors of small intestine [4].

The interval from initial nephrectomy to presentation of intestinal metastases ranges from 3months to 20 years. Intestinal metastases occur equally in the jejunum and ileum and usually present with obstruction and rarely with hemorrhage, anemia or perforation [5].

Small bowel metastasis has been regarded as one of bad prognostic factors in a number of studies [6]. In our case, the patient died within 2 months of diagnoses of small intestinal metastasis. Endoscopic evaluation is necessary for patients with a history of RCC who present with any gastrointestinal tract manifestation for metastasis [4]. Aggressive surgical approach is favored for

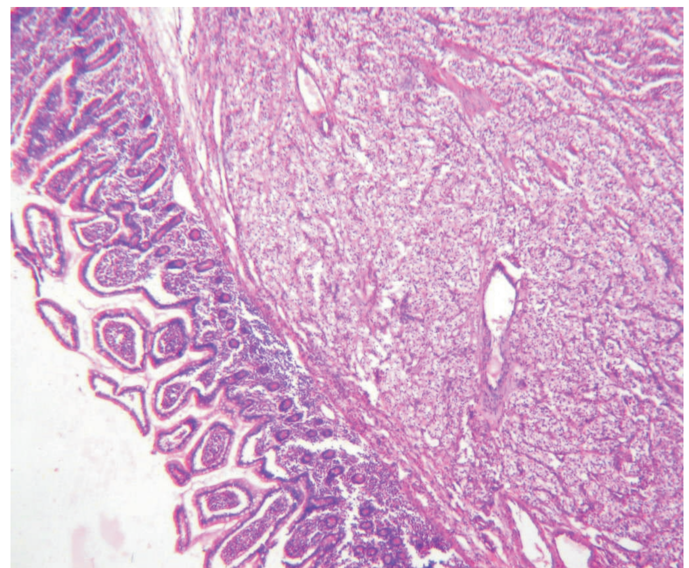

Figure 1: Photomicrograph showing tumor in the Ileal submucosa (H&E, 4x)

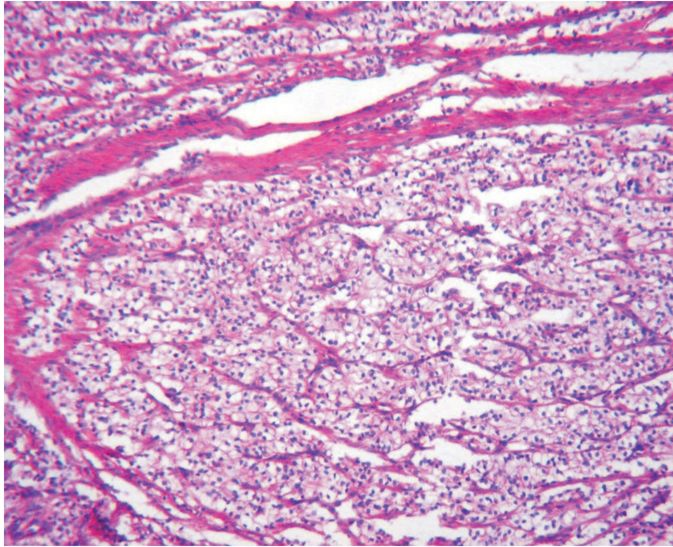

Figure 2: Photomicrograph showing tumor cells arranged in alveolar pattern (H&E, 10x)

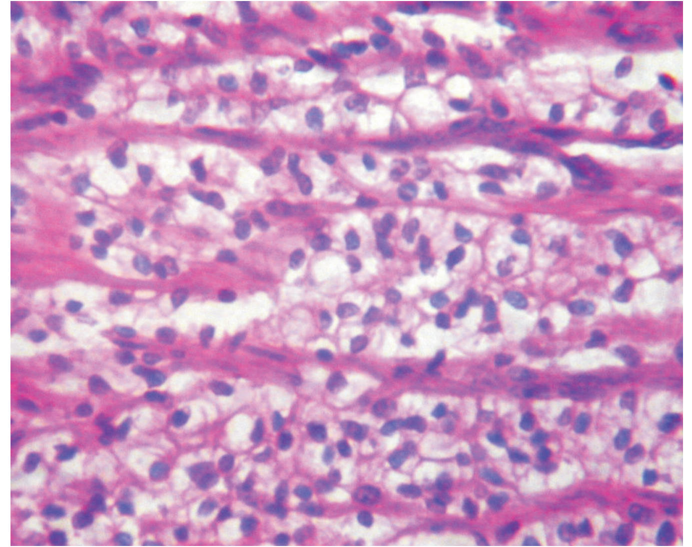

Figure 3: Photomicrograph showing tumor cells with distinct border and clear cytoplasm (H&E, 40x)

small bowel metastasis [5].

Nozawa et al cited a total of 14 published reports on the metastasis of a renal tumor to the small intestine. In their study, eight (57%) of the reported patients had a concomitant metastasis elsewhere, and the metastatic status of five (36%) patients was unknown [3]. Similarly our patient exhibited liver metastasis in addition to metastases to humerus and ileum.

CONCLUSION

To conclude, the biological behavior of renal cell carcinoma is characteristically variable and the clinical course of the disease can range from months to several decades. So, a regular small bowel screening is essential in the follow up of patient with renal cell carcinoma.

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