


Renal Cell Carcinoma Metastasis to the Hypopharynx: A Case Report

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Metastasis of renal cell carcinoma to the head and neck is a rare occurrence. These metastatic head and neck lesions can be the initial presentation of renal cell carcinoma or appear years after primary diagnosis.¹ The most common sites of metastasis to the head and neck for renal cell carcinoma are bone, skin, subcutaneous tissue and lymph nodes.¹ Renal cell carcinoma is the third most common cause of distant metastasis to the head and neck and should heighten awareness of providers to consider metastasis in their differential diagnosis of head and neck lesions.² We report a case of a patient with complaints of dysphagia, with a history of stage IV renal cell carcinoma (with metastasis to the lungs and right adrenal gland), diagnosed as a metastatic mass to the hypopharynx.

This article was deemed exempt by the Institutional Review Board, Dr Barreiro, of Mercy Health Youngstown Hospital.

Case Report

A 72-year-old man with a history of stage IV renal cell carcinoma, metastasis to the adrenal gland and lungs, status post chemotherapy/immunotherapy 7 years prior, presented to our otolaryngology clinic after surveillance computed tomography (CT) scan of the neck showed cervical lymphadenopathy (1.6 cm) and with complaints of mild dysphagia. Fine-needle aspiration of the enlarged cervical node was performed and revealed likely metastatic renal cell carcinoma. He endorsed mild dysphagia but no other symptoms. Oncology initiated chemotherapy, and a 6-month CT neck follow-up showed decreasing cervical lymphadenopathy. The patient finished treatment, but 6 months later, repeat CT neck revealed a 74- × 19-mm mass extending from the oropharynx to the hypopharynx (**Figures 1** and **2**). He noted increased dysphagia at that time and was taken for panendoscopy (direct laryngoscopy, esophagoscopy, bronchoscopy) with biopsy.

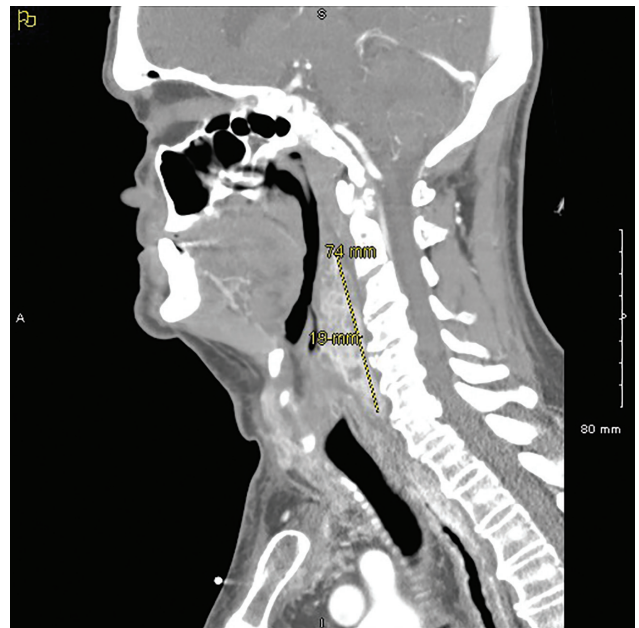


Figure 1. Sagittal view, computed tomography of the neck with intravenous contrast. This figure demonstrates a large 74- × 19-mm mass extending from the oropharynx to the hypopharynx.

Immunohistochemical staining of the cells showed moderate pankeratin, CD10 and PAX 8 staining, and absent staining for leukocyte-common antigen. The morphologic and immunohistochemical features were consistent with metastatic renal cell carcinoma. The patient was deemed to not be a surgical candidate because of the size and location of the mass. Salvage immunotherapy was recommended (Keytruda/Lenvima versus Lenvima/Afinitor combination). Several weeks later, the patient

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Figure 2. Coronal view, computed tomography of the neck with intravenous contrast. This figure demonstrates the vascular appearance of the hypopharyngeal mass.

was admitted for large hemoptysis, and radiation oncology was consulted for palliative radiation to decrease potential recurrent fatal hemoptysis. He is 1 month post 4000 cGy/16 fractions and is doing well from an otolaryngology standpoint.

Discussion

While metastasis of renal cell carcinoma to the head and neck is rare, it should be considered in patients with a history of renal cell carcinoma and head or neck lesions. Renal cell carcinoma is the ninth most common cancer worldwide and represents 2% to 3% of all malignant tumors in adults.² It has a great propensity for metastasis secondary to its hematogenic and vascular access.³ Renal cell carcinoma is the third most common cause of head and neck metastasis, with the thyroid gland most frequently involved.^{2,3} Metastatic renal cell carcinoma to the head and neck can present primarily or years after initial cancer diagnosis. Presenting symptoms are similar to other common masses in the head and neck such as dysphagia, dyspnea, and neck compressive symptoms.³ A presenting symptom of hemoptysis should heighten further investigation for metastatic renal cell carcinoma secondary to the highly vascular stroma of renal cell carcinoma.⁴ Similar to any other head or neck mass workup, ultrasound, computed tomography with contrast, and/or magnetic resonance imaging should be considered with computed tomography with contrast likely preferential as it

highlights the vascular nature of the metastatic tumor. Biopsy to follow can confirm the diagnosis. Treatment of metastatic renal cell carcinoma varies based on location of local and systemic spread in conjunction with the patient's overall prognosis.⁵ Regarding the pharyngolaryngeal region, metastatic renal cell carcinoma has been treated in a goal-oriented fashion to relieve symptoms and improve quality of life through nonsurgical and surgical approaches. While renal cell carcinoma has traditionally been described as a radioresistant tumor, recent reports have shown improving outcomes with radiation therapy, especially in cases of bone and soft-tissue metastasis.² Multiple new immunotherapy agents have also been implemented in the treatment of metastatic renal cell carcinoma with promising perspective. Our report is an addition to one of the few cases in the literature of hypopharyngeal metastatic renal cell carcinoma and further highlights the importance of considering metastatic lesions in one's differential diagnosis of dysphagia symptoms.

Author Contributions

Kilee A. Bayne, author; **Brandon E. Fornwalt**, author, assistant surgeon on patient's case; **Stephen M. Reynolds**, editor, primary surgeon on patient's case; **Eugene L. Potesta Jr**, editor, attending surgeon to the patient.

Disclosures

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