

Oncology

Epiglottic mass as presenting sign of metastatic renal cell carcinoma 4 years after nephrectomy

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Introduction

Renal cell carcinoma (RCC) constitutes 2–3% of all cancers and is the most common renal tumor. Approximately one-third of patients diagnosed with RCC have metastatic disease at presentation.¹ An additional 20–40% will progress to this stage after diagnosis.² According to the AJCC Cancer Staging Manual, the 5-year survival rate of metastatic RCC is only 8.2%.³

Spread of the RCC can occur by three pathways: direct extension, lymphatic spread to hilar and para-aortic lymph nodes, or haematogenous spread, predominantly to the lung, bones, liver, and brain.² Although previous publications have reported metastasis to the head and neck in up to 15% of patients,¹ from which this data originates dates from the early 1970s. A more recent study amongst 671 RCC patients suggests that the actual rate would more likely be around 3.3%.⁴

Case description

A 53-year-old man underwent a right radical laparoscopic nephrectomy in May 2012 for a middle pole intrarenal mass. The pathology report revealed a 5 cm clear cell RCC, pT_{1b}N₀M₀R₀, Fuhrman grade II/IV. The patient's postoperative course and follow up, according to the Canadian Urological Association (CUA) guidelines, were unremarkable.

In January 2017, the incidental finding of a left parotid nodule, which further proved to be a benign Warthin tumor, led to an otolaryngology consultation. Upon further questioning by the otolaryngologist, the patient additionally complained of a persistent laryngeal globus sensation (lump in the throat) of a few months' duration. Flexible nasolaryngoscopy revealed an exophytic epiglottic lesion (Fig. 1). Pathologic analysis of the office-based nasolaryngoscopic biopsy demonstrated a proliferation of clear cells with a solid pattern. Further immunophenotyping, positive for Pax8+ and RCC+, confirmed the diagnosis of a clear cell RCC metastasis.

Further oncologic staging, completed in February 2017,

demonstrated two pulmonary nodules, suspicious for metastases, which weren't seen before in the annual chest x-ray included in the CUA recommended surveillance post nephrectomy. No recurrent lesion was seen at the site of the nephrectomy or intra-abdominally. Considering the inevitable morbidity that would be related to the progression of the epiglottic metastasis (more disabling symptoms such as dysphagia or upper airway obstruction), a transverse partial epiglottectomy was performed via transoral micro-laryngeal CO₂ laser surgery. Final pathology confirmed a clear cell RCC metastasis (Fig. 2). Resection margins were negative.

The patient's postoperative course was uneventful. At six weeks' follow-up, the globus sensation had resolved, the patient did not suffer from any dysphagia or aspiration, and nasolaryngoscopy confirmed satisfactory healing of the surgical site (Fig. 3). A control pulmonary CT scan in fall 2017 didn't show progression of the pulmonary nodules.

Discussion

RCC is the 8th most common malignancy in male and 14th in female. It has a 3:2 male to female ratio and a peak incidence in the fifties. Its histologic subtypes are clear cell (75–85%), papillary (10–15%), chromophobic (5–10%), oncocytic (2–3%), and collecting duct tumor (< 1%). Major risk factors for RCC are tobacco exposure, obesity, hypertension, and hereditary conditions such as the von-Hippel-Lindau syndrome.²

A triad of flank pain, gross hematuria, and palpable abdominal mass is described as the classic presentation. However, these symptoms are encountered in only 10–15% of patients. As such, most patients remain asymptomatic, due to the kidney's distant position within the retroperitoneum. More than 60% of RCCs are now incidentally detected following non-invasive imaging for evaluation of nonspecific symptoms. RCC is thus referred to nowadays as the “radiologist's tumor”, whereas it had previously been called the “internist's tumor”, because of its paraneoplastic symptomatology.²

RCC is one of the most vascular cancers, which partly explains RCC's high potential for metastasis. The pathological sites mostly involve the

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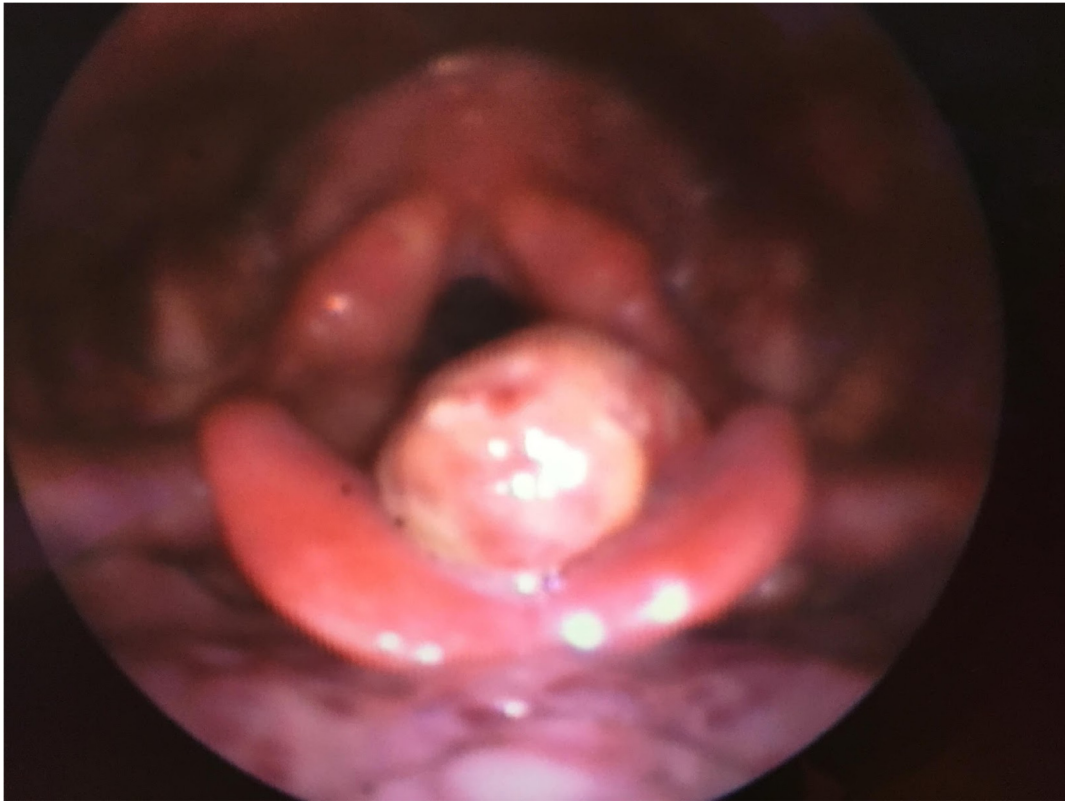


Fig. 1. Initial flexible nasolaryngoscopic finding of an exophytic lesion of the supra-hyoid laryngeal surface of the epiglottitis.

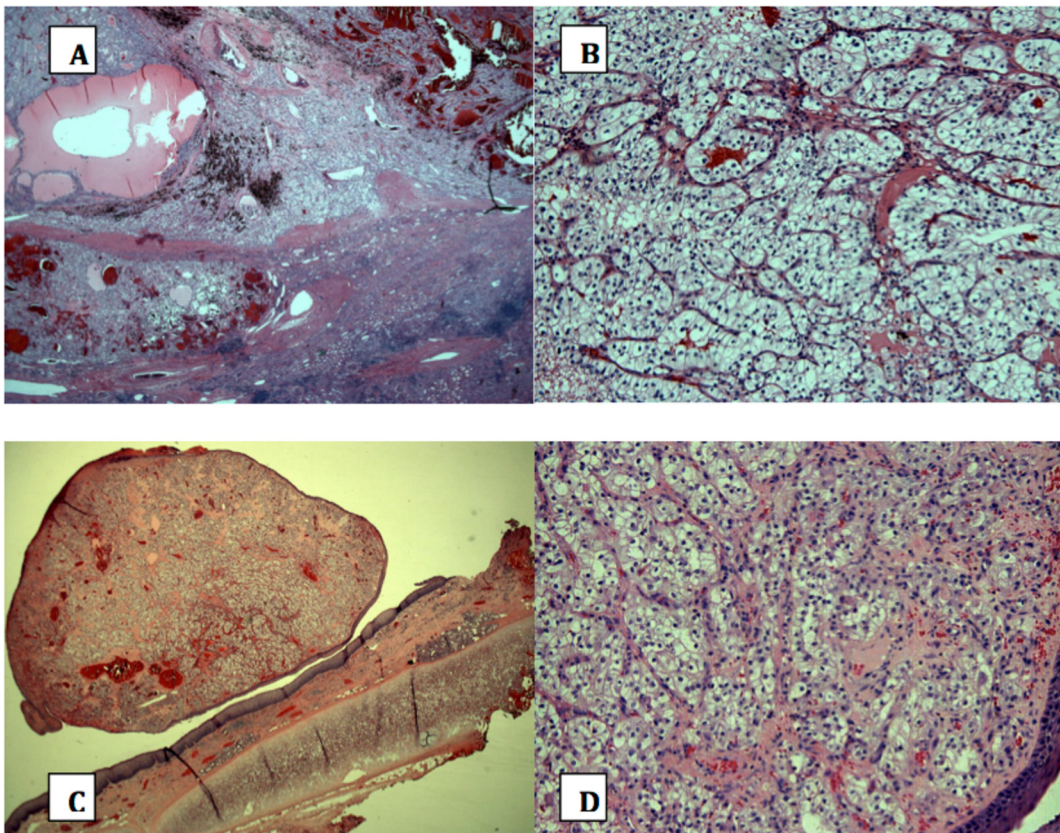


Fig. 2. A: Right clear cell renal carcinoma with H & E staining. Magnification x 2. B: Right clear cell renal carcinoma with H & E staining. Magnification x 20. C: H & E staining of the epiglottic lesion, compatible with a clear cell renal carcinoma metastasis. Magnification x 2. D: H & E staining of the epiglottic lesion, compatible with a clear cell renal carcinoma metastasis. Magnification x 20.



Fig. 3. Six weeks postoperative nasolaryngoscopy, following transverse partial epiglottectomy.

lungs (50–60%), bones (30–40%), liver (30–40%), brain, adrenal gland, contralateral kidney, and retroperitoneum (5% each).

According to the current literature, head and neck metastasis of hypernephroma primarily involves the thyroid. However, an impressive array of anatomic sites and subsites can be affected, including, but not restricted to, lymph nodes, parotid, tongue, skin, skull, and paranasal sinuses.⁴ The first description of laryngeal involvement by metastatic RCC has been published in 1973.¹ Since then, a few case reports have been published, but to our knowledge, none documented an epiglottic mass being responsible for the initial presentation of RCC metastatic disease. The epiglottis was previously described as a specific metastatic subsite for isolated cases of gastric adenocarcinoma, ameloblastic melanoma, pancreatic cancer, and mediastinal leiomyosarcoma.

Radiation therapy may be useful for palliation of metastatic lesions.² However, recent guidelines from the European Association of Urology recommended surgical metastasectomy for most RCC metastatic sites, excepted for the brain and the bones.⁵ Metastasectomy improves the five-year survival rate from 8.2%³ up to 30–45%.⁵ Several factors are associated with a better outcome, such as complete resection, presence of a solitary metastatic lesion, age younger than 60 years, small tumor size, pulmonary metastases, and metachronous metastatic spread.²

Transoral laser epiglottectomy, first described by Vaughan in 1978, has been used for treating localized airway obstructions as well as benign and malignant neoplasms. Further studies have suggested that this approach is effective for treatment of early supraglottic squamous cell carcinoma. For our specific case, a minimally invasive technique was adopted, without dissection of the pre-epiglottic space, due to the favorable distal location of the lesion and the palliative nature of the procedure.

Conclusion

The highly vascular nature of RCC makes it prone to atypical metastatic spread, both synchronously and metachronously, even years after curative intent treatment. The subject of this case report was initially evaluated in otolaryngology for the incidental finding of a parotid mass, which was deemed benign on fine needle biopsy. Standard review of ENT symptoms revealed laryngeal globus and throat irritation of a few months' duration leading to the identification of the laryngeal mass. This was the only symptom of the plurimetastatic disease at the time. This case highlights the importance of addressing mild laryngeal symptoms in patients with a history of RCC.

Conflicts of interest

None declared.

References

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