

CASE STUDY

A Case Report on Nasal Metastasis of Renal Cell Carcinoma

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ABSTRACT

An 81 year old male, a case of renal cell carcinoma (RCC) diagnosed and suitably addressed 25 years ago, presented with a mass in left nasal cavity and infrequent epistaxis for the last 6 months. The histological enumeration of the resected nasal mass created a diagnostic dilemma between glomangiopericytoma and the metastatic manifestation of the RCC which as a tumour was successfully operated earlier and was followed up for 2 years. Since then, the patient had a long event-free period. Co-relation of the past history with computed tomographic scan of abdomen and the positive result of immunohistochemistry of the tissue with CD10 and vimentin, the nasal mass was clinically accepted as a metastatic recurrence from the remote RCC.

KEYWORDS: Epistaxis, Nasal mass, Glomangiopericytoma, Renal cell carcinoma

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INTRODUCTION

Renal cell carcinoma (RCC) is also termed as the internist's tumor because of its multiple unusual signs and symptoms mimicking the local tissue pathology [1]. RCC represents about 90% cases of kidney malignancies, and the role of occupation in the etiology of RCC is unclear [2]. The common symptoms could be the low back pain associated with hematuria, fatigue, weight loss, fever and anemia. The RCC is often diagnosed by ultrasound, computed tomography (CT) scan and magnetic resonance imaging (MRI), sometimes by CT guided fine needle aspiration cytology (FNAC) from the area of concern. RCC often presents insidiously and about 25-30% patients have metastases at the time of diagnosis [3]. Metastasis from RCC accounts for 2.6 % cases of adult malignancy in 50-70 years age, with more prevalence in males than females. Moreover, frequent metastatic sites from RCC include lungs (75%), regional lymphatic nodes (65%), bone (40%), liver (40%) and brain (5%) [4]; and unusual sites are thyroid, pancreas, skeletal muscle, skin and a soft tissue [5]. However, next to breast and lung cancer, RCC ranks the third most frequent neoplasm to metastasize in the head and neck region (up to 15% of cases) with the most common site of metastasis being sinonasal tract, skin, cervical lymphatics, mandible and oral cavity, to state in succinct [6,7]. This reported case is of an 81 year old male with infrequent epistaxis; he had a mass in nasal cavity, which was found to be a metastasis from a recurrent RCC.

MATERIALS AND METHODS

An 81 year old male presented with history of infrequent episodes of epistaxis for duration of 6 months at Ear-Nose-Throat Outpatient patient department of the hospital. The duration and frequency of bleeding subsequently increased in the last month of his presentation at the OPD. In the mean time, he had

productive cough without hemoptysis, which apparently got cured with antibiotics and other supportive treatments. An anterior rhinoscopic examination revealed an irregular mass in left nostril; CT scan of the head and sinuses revealed an expansion of the left nasal cavity with an irregular mass of 3 x 2 x 1 cm size. Finally, the mass was removed in fragments from the left nostril by an endoscopic surgery and was sent for histopathological study.

RESULTS

From the biopsy of the mass, it was opined as glomangiopericytoma, in accordance with local possible pathology. The pathologists were in diagnostic dilemma with RCC, as its histological picture resembled classical clear cell variant of RCC. In hematoxylin and eosin stain, the microscopic feature of the section showed completely eroded mucosal lining and the mass was predominantly infiltrated with polygonal tumour cells in nests with rich, thin fibrovascular stroma (Figure 1). Each tumour cell had abundant, light to clear cytoplasm and a central nucleus with a prominent nucleolus. The tissue section was subjected to IHC. The tumor cells were positive for CD10 and vimentin, while negative for CK7, CK20 and p63, consistent with the metastatic RCC, rather than a primary local pathology of the nasal tissue. Retrospectively, it was found to be biopsy proven case of RCC, for which he had undergone left radical nephrectomy in 1988, during that time, the metastatic evaluation was negative, with an uneventful post-operative follow up for 2 years. The patient remained asymptomatic until the present manifestation. In June 2014, he had infrequent episodes of bleeding from left nostril, which was neglected and ignored, but gradually the mass increased until left nasal obstruction was felt.

In the metastatic workup, an opaque nodule in the lower zone of the right lung was evident in the postero-anterior view of chest X-ray. CT scan of the abdomen revealed an exophytic rounded intensely enhancing cortical mass of 9 x 17 mm, at the upper pole of the right kidney. The rest of the right kidney was normal in appearance, but the right adrenal gland was enlarged and intensely enhanced, measuring about 2.3 x 2.2 x 1.8 cm. Multiple parenchymal nodules of 5-12 mm were found in the basal lung scan. Lytic foci in L₄ vertebral body at the inferior end plate were suggested as metastatic lesion/ Schmorl's node. The hematological and biochemical parameters were found to be normal. Thus, in correlation with the past history, CT scan of abdomen and histopathological examination of nasal mass biopsy supported with IHC confirmation, the final impression was left nasal metastasis of RCC.

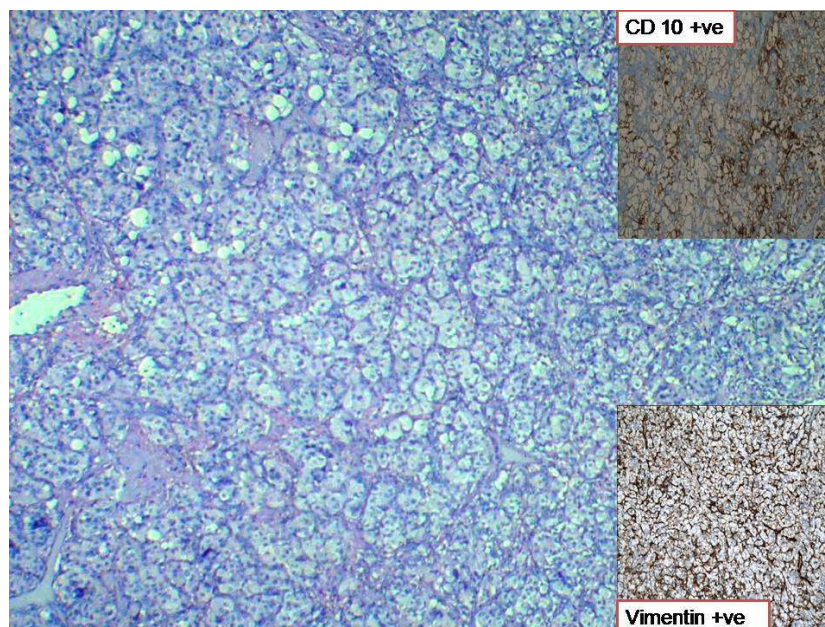


Figure 1. Microscopic image of nasal mass in 10X and insets showing CD10 and vimentin positive.

DISCUSSION

More than 70% renal cancer cases are incidentally detected through radiological investigations for unrelated causes [3]. Less than 10% of patients go with the classic triad of symptomatic criteria for renal cell carcinoma as haematuria, abdominal pain and palpable mass. There are reports of late metastases from RCC, after decades of potentially curative surgical excision of the primary tumour [8], even in the head and neck regions [9]. Furthermore, similar report of nasal metastases with local pathology such as,

nasal obstruction, swelling due to a mass and pain and epistaxis were recorded [9], as seen with this patient. As documented, the median time after a nephrectomy and before a relapse is around 15 months, and 85% of relapses are prevalent within 3 years after resection [6]. Therefore, the interval between nephrectomy and the development of metastases is considered to be a prognostic indicator, but the site of metastasis to nasal cavity can be considered as presenting symptom only. Metachronous metastatic disease has also been reported to develop in 50% of patients with RCC, in those who have undergone a curative radical nephrectomy [10]. This case report focuses on the capacity of RCC to appear almost anywhere and anytime in the body.

CONCLUSION

Uncommon presentation of metastatic RCC but common manifestation of site specific local pathology may pose a diagnostic challenge for clinician as well as pathologist. Excisional biopsy of the nasal mass revealed the metastatic clear cell variant of RCC, after a period of 25 years from the primary radical surgical nephrectomy, which was felt to be worth reporting.

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