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Case Report

Uncommon Presentation of an Occult Renal Cell Carcinoma Unravelling As a Nasal Mass with Epistaxis

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Abstract: Sinonasal region as a site of metastasis is a rare occurrence. About 30 % of cases of renal cell carcinoma first come to clinical attention because of metastasis, and may present with symptoms owing to the site of metastasis. Metastatic renal cell carcinoma to the sinonasal region is rarely documented in literature. We hereby report an uncommon clinical presentation of an occult renal cell carcinoma, presenting with epistaxis secondary to metastatic renal cell carcinoma in a 63 year old male patient.
Keywords: Renal cell carcinoma, metastatic, nasal mass.

INTRODUCTION:

Metastasis of renal cell carcinoma to the sinonasal cavity is an extremely rare occurance with less than 50 cases have been reported so far in literature [1]. Renal cell carcinoma accounts for 85% of primary renal tumors and 3% of all adult malignancies [1]. Patients with renal cell carcinoma develop metastasis in 30% of cases. Although, head and neck region has been reported the sites of metastasis in up to 15% of patients, metastasis to sinonasal region is rare [2]. We present a case of occult RCC that presented with epistaxis and nasal obstruction due to metastasis in the sinonasal cavity.

CASE REPORT:

A 63 year old male patient was admitted to the hospital with complains of right nasal obstruction that was insidious in onset and progressive in nature and was not associated with nasal discharge. The patient also complained of two episodes of epistaxis which was sudden in onset and unprovoked, without any aggravating or relieving factors. On physical examination swelling was noticed on the right side of the nose extending from the root to the mid dorsum of the nose. On Rhinoscopy, there was broadening of the nasal bridge on the right side and a slough covered granular mass was seen in the vestibule covered with mucopurulent discharge. The mass was seen partially eroding the hard palate. On imaging CT scan showed a well defined heterogeneously enhancing mass lesion with internal non enhancing necrotic-cystic areas in the right nasal cavity causing local destruction with multiple metastatic left supraclavicular, mediastinal and prevertebral nodal masses were also seen.

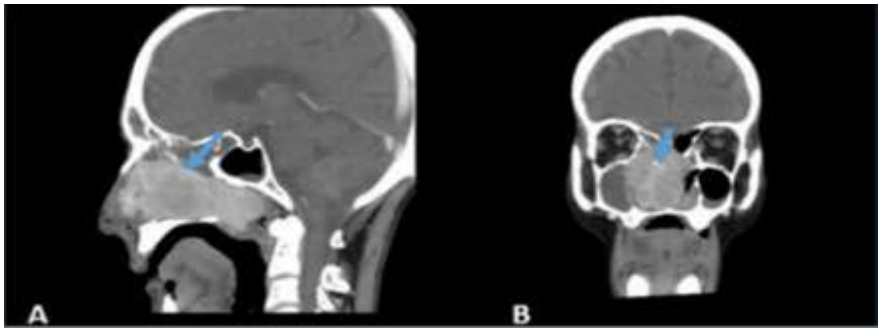

Fig-1A: CT scan-Large well defined heterogeneously enhancing mass in the right nasal cavity
B: The mass is seen extending into the right maxillary sinus and ethmoid sinus with destruction of the medial wall of the maxillary sinus

The biopsy from the nasal mass had to be repeated thrice since the first two biopsies only showed proliferating vessels, dense areas of haemorrhage and inflammatory cells. The third biopsy from the mass in the nasal cavity showed tumor cells with abundant clear cytoplasm, centrally placed mildly pleomorphic nuclei with irregular nuclear contours arranged in sheets, nests and alveolar pattern supported by numerous thin walled capillaries arranged in a plexiform pattern.

On Immuno histochemistry, the tumor cells were focally positive for CD10 and RCC marker was diffusely positive which was consistent with the diagnosis of a Metastatic Renal Cell Carcinoma.

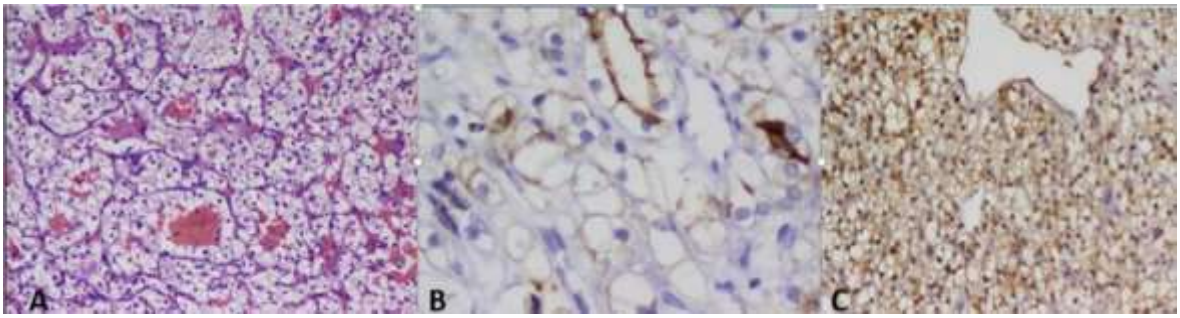

Fig-2A: Tumor cells with clear cytoplasm and mildly pleomorphic nuclei arranged in alveolar pattern supported by numerous thin walled capillaries in plexiform pattern (H & E magn x 200).
Fig-2B: IHC with CD 10 showing focal membrane positivity in tumor cells (magx 400).
Fig-2C: IHC with RCC marker showing diffuse positivity of luminal side of cell membrane (mag x 200)

USG abdomen was done as a part of metastatic work up which showed a heterogeneously enhancing solid cystic mass measuring 13x9.2x7.7cm completely replacing the right kidney with multiple nodal metastasis suggestive of Renal cell carcinoma with metastatic lymphadenopathy.

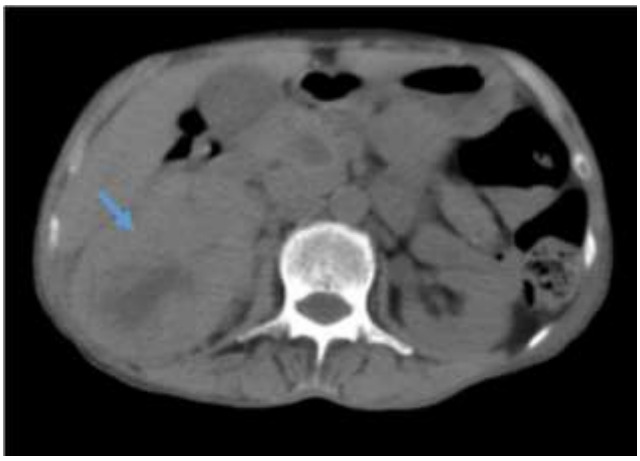

Fig-3: Right kidney completely replaced by the solid cystic mass lesion

In view of the growth in the nose and CT findings and recurrent epistaxis patient underwent right medial maxillectomy.

DISCUSSION:

Renal cell carcinoma presenting with flank pain, palpable mass and gross hematuria is seenin only in 10 % of patients, whereas 1/3 of the patients present with distant metastasis as the initial presentation of RCC [1]. Metastatic disease to the head and neck is seen in 15% of the patients of RCC. The most common location above the clavicle is the thyroid bed with nose and paranasal sinuses being the second most frequent site [2]. Paranasal sinus is a rare location of metastasis. RCC is the most frequent tumor to metastasise to the paranasal sinuses. Kamaski *et al.;* documented 46 cases of metastatic tumors to the head and neck and only 4 for the nasal cavity and paranasal sinuses. Symptoms are non specific but epistaxis is the most common symptom in patients with nasal metastasis [4]. Although primary tumors of paranasal sinuses are more common, when a nasal mass is detected metastatic tumors from other primary sites should also be considered in the differential diagnosis. [3]

CONCLUSION:

Metastasis of RCC to the nasal cavity is rare as the first presentation and is usually associated with advanced disease and poor prognosis [1]. Renal cell carcinoma is an aggressive tumor with a propensity to distant metastasis [5]. Renal cell carcinoma metastasis to the nasal cavity should be considered as the differential diagnosis in all patients with epistaxis [1].

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