



A RARE CASE OF SKIN METASTASIS FROM CLEAR CELL RENAL CELL CARCINOMA

Pathology

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ABSTRACT

Renal cell carcinoma metastasis is seen in approximately 25% of all cases. Rarely they can occur in uncommon sites. We present a case of a 56-year-old male patient who presented with a nodular lesion on the scalp in the parietal region. The skin nodule appeared six years after the nephrectomy procedure performed for a right renal cell carcinoma. Surgical excision was done under local anesthesia. A diagnosis of skin metastasis of clear cell carcinoma was made after histopathological examination. This case highlights not just an unusual site of metastasis but also the fact that metastasis occurred despite its low grade and stage (pT1N0M0). Although the prognosis for metastatic renal cell carcinoma (RCC) with skin metastases is poor, our case could contribute more information to the data published on this rare case scenario to date. Even though skin metastases are a poor sign of progression, proper surgical removal improves disease-free survival.

KEYWORDS

Metastasis, renal cell carcinoma, skin

INTRODUCTION

Of all the solid cancers, 2–3% are Renal cell carcinoma, which usually occurs in the age group between 50 to 80 years of age and is two times more common in men than in women.^[1,2] Almost 30% of cases are found to have metastasized at the time of diagnosis.^[3] Frequent sites of metastasis are the lungs, liver, and bones.^[4] Skin metastasis is rare. We report a case of a 56 year old male who presented with a scalp metastasis that originated from Renal Cell Carcinoma, 6 years after surgery.

Case

A 56-year-old man presented with swelling over scalp that was found 5 months ago. 6 years ago, patient had presented with right flank pain, was evaluated and was found to have a mass lesion in the right kidney and right radical nephrectomy was done and was diagnosed as Clear cell Renal Cell Carcinoma in 2019. He had no other issues in the routine follow-up. On physical examination, he was found to have a swelling in the parieto-occipital region of scalp measuring 3x2 cm. The patient said that the swelling was small initially when it appeared 5 months back and then gradually increased to current size. Clinical diagnosis was Epidermoid cyst. Local excision was done under local anesthesia. The lesion was diagnosed as clear cell carcinoma on histopathological examination (Figure 1) and evaluated as renal cancer metastasis. Immunohistochemistry was done and the lesion was positive for CD10 (Figure 2 a) and PAX 8 (Figure 2 b). No recurrence was found in the patient. The further plan was to evaluate for any other metastasis by doing a PET scan and to start the patient on Tyrosine Kinase inhibitors but the patient was lost to follow up.

DISCUSSION

Renal cell carcinoma contributes 3% of all adult tumors. Common sites of Renal cell carcinoma metastasis are lungs, liver, bones, lymph nodes, contralateral kidney or adrenal glands.^[5] Skin metastasis from RCC is a rare entity that is seen in only 2.8–6.8% of the patients.^[2] 80–90% of patients with RCC metastasis to skin are patients with a previous diagnosis of renal cell carcinoma. But 10–20% of patients are diagnosed with skin lesions before the primary lesion is found.^[2] Metastasis of renal cell carcinoma to skin are most commonly found on the face and scalp.^[5] Lesions usually occur within six months to five years after the initial diagnosis of Renal cell carcinoma. Another distant metastases or recurrence of the tumor are found in the most of the patients who come with a skin metastasis.^[5] RCC skin metastasis is considered as a poor prognostic indicator, and the expected lifespan is not more than six months.^[4] Skin metastases of renal cell carcinoma present as nodular, rapidly growing, rounded or oval-shaped lesions, of normal skin color to a reddish-purple color.^[7] Clinically it may be misdiagnosed as hemangioma, basal cell carcinoma or pyogenic granuloma.^[1] In histopathological examination, clear cell carcinomas have abundant clear cytoplasm with enlarged, hyperchromatic, rounded nuclei with inconspicuous, visible or prominent nucleoli. The lesion is usually surrounded by atrophic epidermis, and moderate amount of lymphocytic infiltrates.^[7] In the case of RCC metastasis,

PAX8 and carbonic anhydrase 9 are the most helpful markers for confirming RCC and clear cell type, respectively.^[8] EMA, CEA, CD-10, renal cell carcinoma marker are the usual markers used to confirm skin metastases from renal cell carcinoma.^[9,10] Radical nephrectomy followed by treatment with angiogenesis/multikinase inhibitors (sunitinib, sorafenib) is the treatment of choice in cases of metastatic renal cell carcinoma.^[5] The treatment approach for single, isolated skin lesions wide excision of the lesion with sufficient margins. In cases where surgery is not possible, Radiotherapy may be considered as an alternative.^[5] In our case, skin metastasis was detected 6 years after the first diagnosis, and no recurrence was detected on evaluation. Further plan was to start the patient on Tyrosine Kinase inhibitors and PET scan was advised to look for any other metastasis. But the patient was lost to follow up.

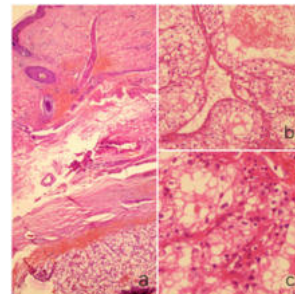


Figure 1 a) Low power view showing nests of neoplastic cells in the dermis (H and E, 4x), b) Nests of neoplastic cells separated by fibrovascular septae (H and E, 20X), c) Neoplastic cells with abundant clear cytoplasm, enlarged nuclei with visible nucleoli (H and E, 40X)

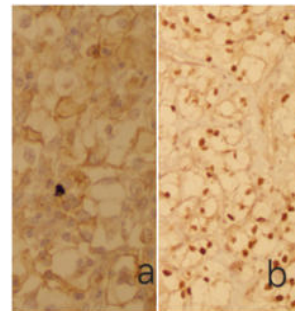


Figure 2: a) CD 10 positive b) PAX8 positive

CONCLUSION

Although skin metastases are interpreted as a bad sign of progression, disease-free survival is better after appropriate surgical excision. Therefore careful evaluation of skin lesions is important in renal cell carcinoma patients.

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