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RENAL MALIGNANCY METASTASIZING TO AN UNUSUAL SITE.

Medical Science

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ABSTRACT

Introduction-Renal cell carcinoma (RCC) mostly shows hematogenous spread to organs such as liver, lung and accounts for around 3% of all cases of skin metastasis. [1]

Case Report- In our case a 54-year-old male patient had a left-sided renal malignancy for which he underwent radical nephrectomy outside. The histologic type reported outside was High grade invasive papillary urothelial carcinoma and the pathological tumor staging was pathological T3. He subsequently developed multiple subcutaneous nodules, five months after the initial diagnosis.

Histopathology- We performed a biopsy, and the pathological diagnosis was metastasis of metastasis of epithelial carcinoma. We here-in report a case of metastasis of Renal Cell Carcinoma that occurred after the initial diagnosis.

KEYWORDS

renal malignancy, metastasis, rare sites

INTRODUCTION

Metastasis of renal malignancy to the skin is a rare finding.[2] It mostly shows hematogenous spread to organs such as liver, lung and accounts for around 3% of all cases of skin metastasis.[1]

CASE REPORT

A 54 years old male patient presented with hematuria, PET scan was done which was suggestive of renal malignancy.

PET CT done showed an infiltrative urothelial mucosal thickening, arising from upper pole of renal pelvi-calyceal system. Infiltration of renal medulla, cortico-medullary junction and adjacent part of renal cortex. Long standing left kidney hydronephrosis due to pelvi-ureteric junction stenosis.

Radical nephrectomy with bladder cuff excision was done outside in the month of February.

Histopathological analysis of the nephrectomy specimen was done outside and it showed a tumor with features of high grade papillary urothelial carcinoma invading the renal parenchyma and perinephric fat. No lymph nodes were involved. Pathological staging was given as p T3 N0.

Patient presented with pleural effusion 5 months later suspicious for lung metastasis. Patient then also complained of subcutaneous nodules.

Clinically the subcutaneous nodules were suspicious of panniculitis or metastatic deposits of primary malignancy.

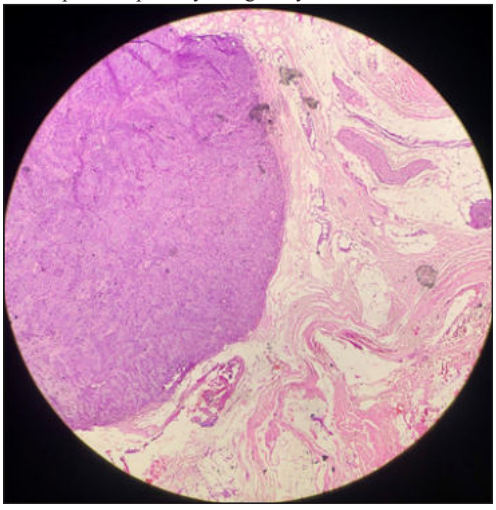

Fig:1 H&E 4X; Tumor Nodule Seen In The Subcutaneous Fat

HISTOPATHOLOGICAL FINDINGS OF THE BIOPSY FROM THE SUBCUTANEOUS NODULES

Biopsy from the subcutaneous nodules was performed, sections studied showed a well circumscribed tumor nodule with tumor cells arranged in trabeculae and nests, separated by fibrous stroma. Individual tumor cells were round with increased nuclear-cytoplasmic ratio, vesicular nuclei with prominent nucleoli and eosinophilic cytoplasm. Mitotic count was 4-5/high power field. Tumor giant cells were seen. There was no evidence of necrosis or papillary configurations. Tumor was seen infiltrating the surrounding collagenous tissue and subcutaneous fat. Findings were suggestive of metastatic epithelial carcinoma in a known case of high grade invasive papillary urothelial carcinoma.

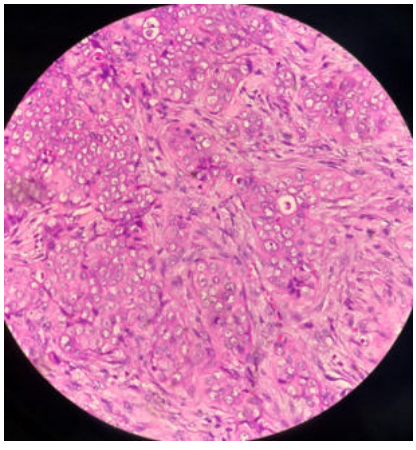

Fig2: H&E 40X; Tumor Cells Showing Pleomorphic Nuclei

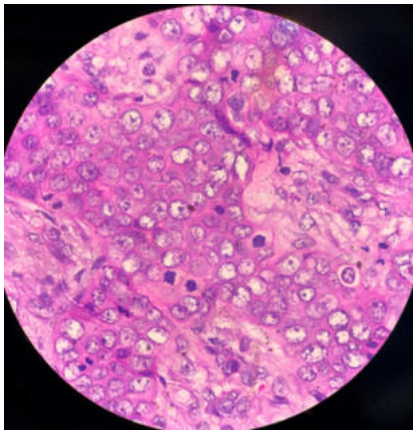

Fig 3: H&E 100X; Brisk Mitosis Noted

DISCUSSION

Renal malignancy comprises approximately 3% of the tumors occurring in the adult age group. renal tumors most commonly metastasize to the lungs, liver, lymph nodes, bone, adrenals and the kidney. Skin is a rare site for the metastasis of renal malignancy[2]

Cutaneous metastasis may be an initial sign of presentation in renal cancers as reported in the study by Chan DY, that showed 10-20% cases with skin metastasis in the form of multiple or solitary skin lesion.[3]

Eighty-five percent of metastatic renal carcinoma cases develop in 3 years, and the other 15% of cases were reported from 3 to 11 months from initial nephrectomy.[9]

In our case the patient presented with complaints of pleural effusion and subcutaneous nodules 5 months after the initial diagnosis.

Based on the research done by Sountolides et al some of the rare sites of metastasis include- head and neck, orbit, parotid gland, nasal cavities, tonsils, tongue, thyroid gland, heart, skin which was reported in approximately 3% of renal tumors.[4]

Scalp and face were the commonly affected sites in cases of renal cell carcinoma metastasizing to the skin.[7]

Skin metastases can be categorized into patterns such as nodule pattern, inflammatory pattern, and non-pain nodule pattern.[8]

Skin metastases of renal cell carcinoma present as nodular, rapidly growing, round or oval-shaped lesions, which can be of various colors ranging from normal skin color to a red-purple color.[10]

There are four different mechanisms of skin invasion namely, direct invasion from underlying tumor, operative scar metastasis, lymphatic spread, hematogenous spread.[11]

Cancer cell metastasis to the skin presents a poor prognosis.[12]

CONCLUSION

Many patients of renal malignancies may show recurrence thus, emphasizing the need for a long term follow up plan in such cases.

Skin lesions occurring in a known case of renal malignancy should be evaluated extensively to rule out metastasis.

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