A FRONTAL BONE SWELLING GUIDED TO REACH THE DIAGNOSIS OF RENAL CELL CARCINOMA
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HOW TO CITE THIS ARTICLE: Majhi PC, Behera NC, Singh GP. A frontal bone swelling guided to reach the diagnosis of renal cell carcinoma. J. Evid. Based Med. Healthc. 2017; 4(53), 3271-3272. DOI: 10.18410/jebmh/2017/649

PRESENTATION OF CASE
A 59 year male presented to Urology Outpatient Department (OPD) with a painless forehead swelling. He was operated for the same swelling two times within last three months by an orthopaedic surgeon initially and then by a neurosurgeon. In the last 3 weeks, the swelling has recurred and increased in size to attain a dimension of 4 cm x 3 cm currently. The initial histopathological (HP) finding of the excised lesion showed fibrocollagenous stroma, and small to large lumina with lobules of polygonal clear cells having distinct cytoplasmic membrane and small dark round to slightly irregular nuclei suggestive of clear cell Hidradenoma. (Figure 1). The histopathological findings of the same lesion after re-excision revealed vascular network interspersed within homogeneous nests of cells with clear cytoplasm suggestive of metastatic Clear Cell Carcinoma (mccRCC). Based on second HP report, patient was referred to us to rule out mccRCC.

Patient was a known hypertensive for last 13 years and under antihypertensive medication. The swelling was firm to hard in consistency, immobile and was not associated with pain. Except for the forehead swelling, rest of the clinical examination revealed no abnormality. All the blood parameters revealed no derangement.

DIFFERENTIAL DIAGNOSIS
Osteoid osteoma, Dermoid cyst, Lipoma, Myofibroma, Osteosarcoma, Hemangioma, Clear cell Hidradenoma and metastatic clear cell carcinoma (ccRCC) were included in the differential diagnoses with this presentation.

CLINICAL DIAGNOSIS
Patient had undergone Computed Tomography (CT) of brain after recurrence, which showed a lytic mass in right superior aspect of frontal bone with avidly enhancing soft tissue component suggestive of probable metastatic lesion (Figure 2, 3). CT of abdomen and lower chest was performed which revealed a heterogeneous enhancing lobulated mass of size 5.9cm x 2.4cm x 6.5cm in upper and mid pole of left kidney, and multiple hyperenhancing isodense lesions in right lobe of liver (Figure 4, 5). Multiple parenchymal nodules and minimal pleural effusion was seen in bilateral lung field. The above findings were suggestive of left renal cell carcinoma with multiple secondaries in bilateral lungs and liver.

PATHOLOGICAL DISCUSSION
Following cytoreductive nephrectomy of left renal tumour, histopathological study showed vascular network interspersed within homogeneous nests of cells with clear cytoplasm suggestive of mccRCC with Fuhrman’s grading 3 (Figure 6).

Financial or Other, Competing Interest: None.
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DOI: 10.18410/jebmh/2017/649
DISCUSSION OF MANAGEMENT

After complete evaluation and discussion with the patient and his relatives, he was subjected for cytoreductive nephrectomy and targeted therapy. Left cytoreductive nephrectomy with regional lymph node dissection was performed with transperitoneal subcostal approach (Figure 7). As the right frontal mass was asymptomatic, it was not operated at the same, but consulted for craniofacial surgery.

REFERENCES


One unit of whole blood was replenished during early postoperative period. Rest of the perioperative period was uneventful and he was discharged on 8th postoperative Day (POD). There is some promising results in terms of progression-free survival when metastatic RCC were treated with targeted therapy like sunitinib (oral multi-targeted tyrosine kinase inhibitor), sorafenib, bevacizumab/erlotinib (recombinant humanised monoclonal antibody) and CCI-779 (temsirolimus).1 Now, patient is on 15th POD and waiting for targeted therapy.

FINAL DIAGNOSIS

The final diagnosis in this patient was left ccRCC (clear cell renal cell carcinoma) with multiple distant metastasis to bilateral lungs, liver and frontal bone. As mcrRCC has got high propensity to metastasise and a good percentage of patients presented with metastatic lesion only, an astute surgeon should always try to pick up any suspicious lesion. Around 50-60% of RCC are now detected incidentally. Symptoms associated with RCC may be due to local tumour growth, haemorrhage, par neoplastic syndrome or metastatic disease. Metastatic masses maybe the first presentation of RCC or maybe diagnosed years after radical nephrectomy. 2 mcrRCC most commonly metastasise hematogenously primarily to the lung (75%), bones (20%), lymph nodes (11%), liver (18%) and brain (8%). But, sites other than thoracic, skeletal, hepatic and adrenal are considered unusual and may present a diagnostic challenge and invite unnecessary multiple surgeries like current case.

In about 15% of cases, metastases to the head and neck occur.4 Paranasal sinuses, thyroid, larynx, mandible and parotid glands are the common sites for metastasis in the head and neck region.5 The treatment of a tumour only be started after certain diagnosis with HP study. A higher stage of the disease is expected if the diagnosis is delayed and modify treatment modality.