Giant Chromophobe Renal Cell Carcinoma

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Abstract:

Chromophobe renal cell carcinoma is a rarely-seen type of renal cell carcinoma. It accounts for 5% of all adult primary renal tumors. Giant renal tumors are not frequently encountered. Herein, we present a case of a giant chromophobe renal cell carcinoma, 23 cm in length and 2,680 g in weight, which completely filled the left side of the abdomen.

Key words: Renal Cell Carcinoma, Kidney Neoplasms, Abdomen, Kidney, Humans.

Introduction

Chromophobe renal cell carcinoma (CRCC) is a rare type of renal cell carcinoma. It is accounts for 5% of all adult primary renal tumors [1]. CRCC may be seen in different sizes, but giant ones are not frequently encountered. Herein, we present a case of a giant chromophobe renal cell carcinoma that completely filled the left side of the abdomen, which is extremely infrequent in the literature.

Case Report

A 50-year-old female patient presented to our clinic with complaints of constipation and abdominal pain that had lasted for several months. On physical examination, a palpable mass that completely filled the left upper quadrant was detected. On CT, a giant renal mass that completely filled the left side of the abdomen was identified [Fig.1].

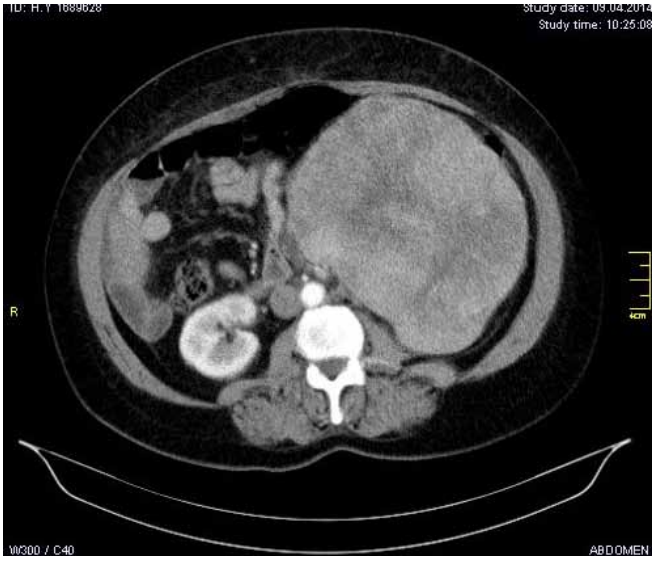

Fig.1: A giant renal mass that completely filled the left side of the abdomen as seen in CT scan.

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No metastasis was found in the abdominal organs or lungs. There was no invasion into the renal vein and no pathology was detected on blood and urine analysis. The patient underwent left radical nephrectomy through a transperitoneal anterior subcostal (chevron) incision. The patient did not develop complications peri- or postoperatively. On microscopic examination, the removed mass measured 28x24x19 cm in size and 2,680 g in weight. On pathological evaluation, the nuclear grade of the CRCC was found to be IV/IV. No tumor was detected in the surgical margins or the renal vein [Fig.2].

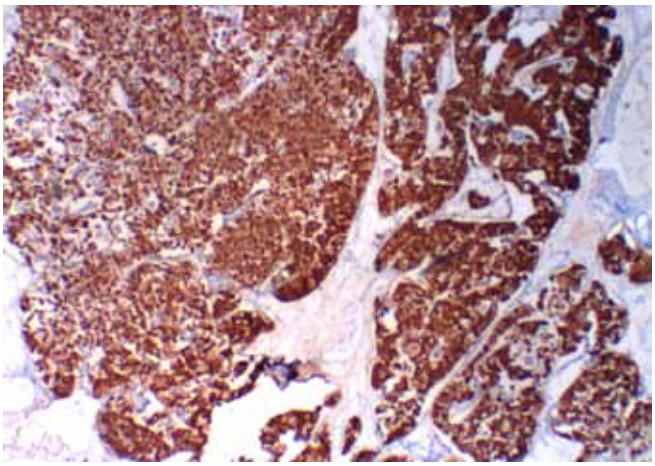

Fig.2: Microscopic section of the renal tumor shows a chromophobe renal cell carcinoma [Epithelial Membrane Antigen (EMA) x20].

Discussion

CRCC, which is a rarely-seen renal tumor, was described by Thoenes *et al*. in 1985 [2]. It has a better prognosis than clear cell carcinoma, with a 5-year survival rate between 80% and 90%. This carcinoma is mostly seen in the 6th decade of life and affects almost equal proportions of males and females [1]. A pathologically large tumor size, sarcomatoid or papillary differentiation and tumor necrosis are accepted as poor prognostic findings [3]. Metastasis to the liver indicates a poor clinical course. No poor prognostic finding was observed in our case. Although there are no definite size and weight concepts accepted for giant renal tumors, it has been stated that a tumor with a size larger than 20 cm can be accepted as "giant" [4]. Accordingly, the tumor size of 28x24x19 cm and weight of 2,680 g in our case meets the definition of a giant mass. A case with a weight reaching 10 kg and a size exceeding 30 cm has been published in the literature [5]. Since CRCCs usually have a good prognosis, they can reach large sizes without metastasis. Renal vein invasion may be seen in 5% of cases. In our case, we did not find tumor in the renal vein, surgical margins or evidence of distant metastasis. In addition to CRCC, among the renal-origin tumors, oncocytoma, angiomyolipoma, clear cell cancer, cystic nephroma and sarcoma also may present as giant masses. CRCC does not have any specific diagnostic tumor markers. Some authors who advocate that the Fuhrman nuclear-grade system used in pathological evaluation is not beneficial for the prognosis recommend the three-grade chromophobic tumor grade (CTG) system [6].

Conclusion

We recommended that CRCCs that are not frequently encountered among renal-origin giant masses should be considered in the differential diagnosis, and their very good prognosis despite their giant size should be taken into account.

References

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