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Isolated splenic metastasis from clear cell renal carcinoma – A case report

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ABSTRACT

BACKGROUND: Metastatic deposits in spleen are rare owing to its physiological functions and sharp angle of splenic artery with coeliac axis.**CASE REPORT:** We report a case of a 53 year old male with clear cell carcinoma of left kidney. Isolated splenic metastasis was detected on a follow up PET CT scan 2 months post radical nephrectomy. Splenectomy was performed; histopathology confirmed multiple metastatic lesions within the spleen**CONCLUSION:** Timely treatment of isolated metastasis in case of renal cell carcinoma carries good prognosis.© 2016 The Authors. Published by Elsevier Ltd on behalf of IJS Publishing Group Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

1. Introduction

Splenic metastasis is uncommon and is usually associated with widespread metastatic disease [1,2]. Isolated splenic metastasis is still rarer. We report a case of isolated splenic metastasis in a case of clear cell renal carcinoma.

2. Case report

A 53 year old male with no significant previous medical history presented to the emergency department with complaints of massive hematuria, abdominal sonography showed a mass in lower pole of left kidney and clots in urinary bladder. Emergency radical nephrectomy and cystoscopic clot evacuation was done. The tumor was about 12 × 10 cm almost replacing whole of the kidney. No other lesion was seen in abdomen intraoperatively. Histological examination revealed clear cell renal carcinoma with extension into adrenal gland. Patient was started on sunitinib.

Two months post operatively, follow up PET CT scan was done, which was unremarkable except for multiple lesions in spleen (Figs. 1 and 2). Curative splenectomy was done and histological examination confirmed metastatic lesions (Fig. 3). Patient had an uneventful postoperative course and has been restarted on sunitinib and he remains well (Fig. 4).

3. Discussion

Spleen is commonly involved in haematological malignancies, but it is rather uncommon site for tumor metastasis. The reported incidence of metastatic tumors in spleen varies from 0.3 to 7.3% [3]. The rhythmic contractions by splenic sinusoids and its physiological actions of phagocytosis and immunological antineoplastic action may be the factors preventing tumor seeding in spleen. The sharp angle of splenic artery with the coeliac axis may also prevent large tumor emboli from entering the artery [3,4].

The reported primary tumors metastasizing to spleen include breast, lung, and malignant melanoma [3]. Although incidence of metastatic spread from renal cell carcinoma has been reported to be 4.6% in an autopsy series [5], there are only a few case reports of isolated splenic metastasis in RCC in literature. Detection of splenic metastasis is clinically important for the staging and treatment planning of disease, and high tumor burden may lead to sudden death due to splenic rupture [2,3].

In majority of cases splenic metastasis are detected synchronously or shortly after primary tumor during follow up imaging studies [2,3]. Direct extension from a left sided RCC has been documented⁴, however due to paucity of data, it is difficult to comment on exact incidence. In the present case the splenic capsule was intact indicating a metastatic lesion. Primary presentation as splenic mass diagnosed on fine needle aspiration cytology as RCC has also been reported [6].

About 25 to 30% of patients with RCC have metastasis on presentation and almost 50% of patients with low stage disease on presentation go on to develop metastasis post nephrectomy.

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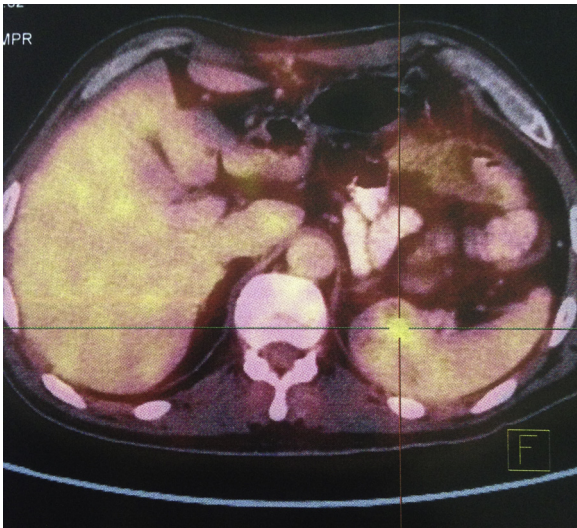


Fig. 1. xxx.

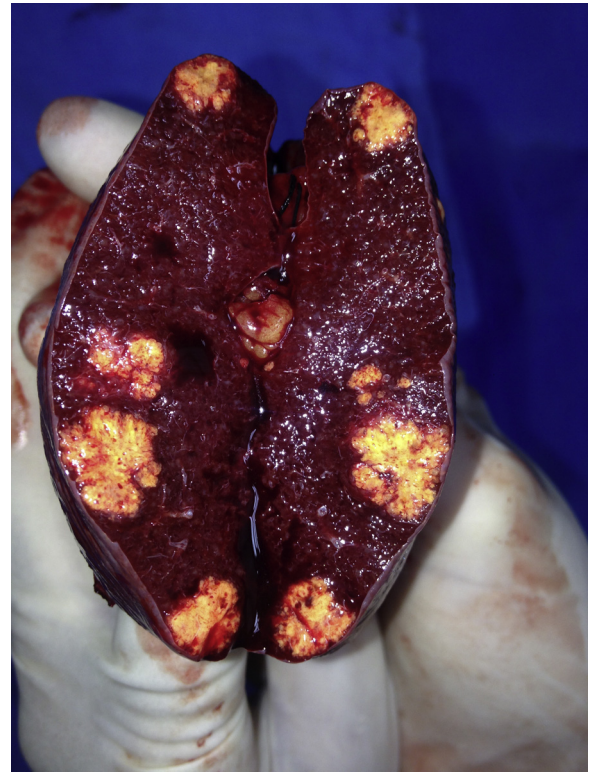


Fig. 3. xxx.



Fig. 2. xxx.

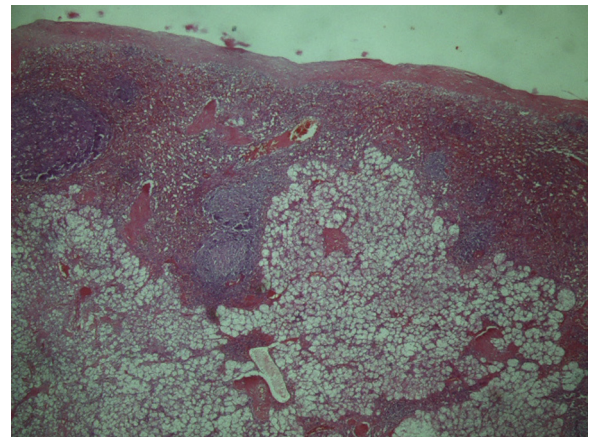


Fig. 4. xxx.

Most common sites are lungs, bone followed by liver [7,8]. Site and disease volume of metastasis influence the prognosis [7]. Single site metastasis is associated with better prognosis and surgery is the best treatment for an isolated lesion. Follow up is done with ultrasonography, CT, PET [4].

Author contibution

Study conception and design: Rudra Prasad Doley.
 Acquisition of data: Supreet Kaur Grewal, Manish Singla.
 Analysis and interpretation of data: Kishor Roy, Rudra Prasad Doley, Rajeev Kapoor.
 Drafting of manuscript: Supreet Kaur.
 Critical revision: A.S. Bawa, Jaidev Wig.

Financial disclosures

Nothing to disclose.

Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request". Identity of patient has not been disclosed.

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Supreet Kaur Grewal, Rudra Prasad Doley Dubey.

Conflict of interest

None.

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