Clinical Images and Case Reports Journal

Clinical Image | Vol 5 Iss 1

Diffuse Large B-Cell Lymphoma Presenting with Large Adrenal Masses

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Received: December 25, 2022; **Accepted:** January 04, 2023; **Published:** January 15, 2023

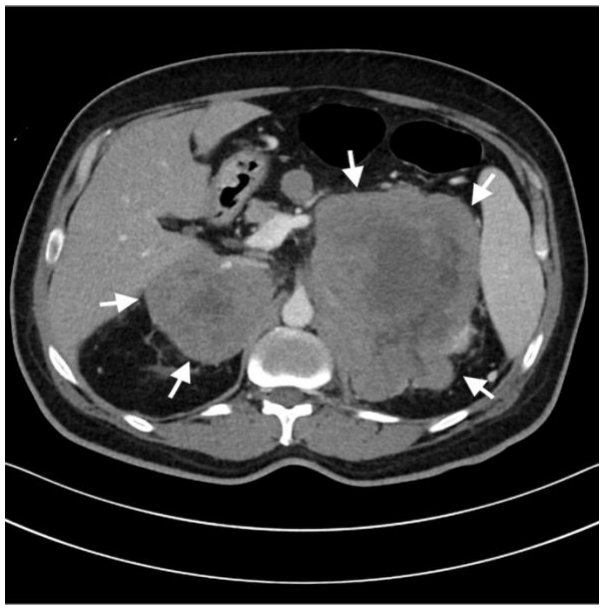

Figure A: Axial plane computed tomography (CT) images of abdomen and pelvis showing bilateral large heterogenous necrotic adrenal masses (white arrows). The left mass measured 20.5cm x 12cm, and the right mass measured 8.5 x 7.5cm.

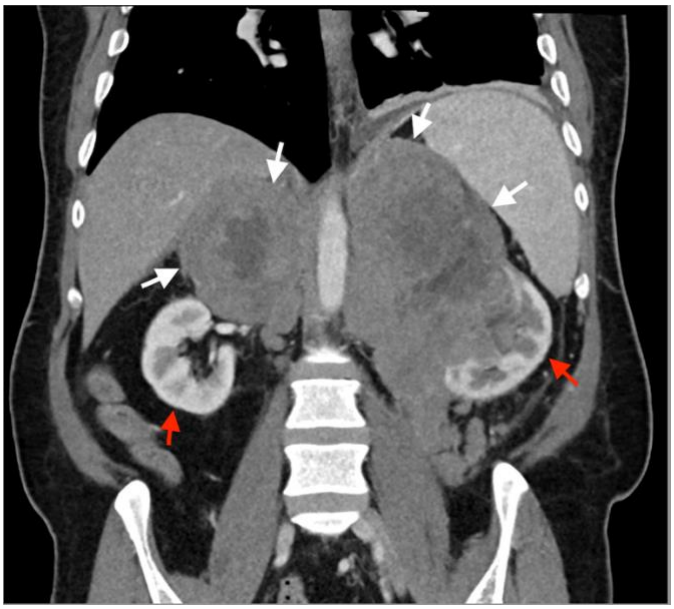

Figure B: Coronal plane CT images of abdomen and pelvis showing bilateral large heterogenous necrotic adrenal masses (white arrows). The left mass can be seen invading the left kidney, while the right mass is separate from the right kidney (red arrows).

Clinical Image

A 56- year -old man presented to the hospital with generalized fatigue, anorexia, nausea and vomiting for the last two months. This was associated with an unintentional weight loss of 30kg. On physical examination he was hypotensive, tachycardiac, and dehydrated. Laboratory evaluation confirmed primary adrenal insufficiency. Imaging studies are described above.

Histopathology from a CT-guided biopsy of the adrenal mass was consistent with diffuse large b-cell lymphoma. Immunohistochemistry studies showed tumor cells that are strongly and diffusely positive for CD45, CD20, PAX5, and BCL6. Ki67 proliferation index was >95%. Further work-up of these adrenal masses was negative for catecholamine excess and hyperaldosteronism. The patient was started on glucocorticoid replacement for the adrenal insufficiency and chemotherapy for his lymphoma.

The differential diagnosis for adrenal nodules is large containing both benign and malignant conditions. Benign causes include, adrenal adenoma, congenital adrenal hyperplasia, infectious and infiltrative diseases. Malignant conditions, on the other hand, are associated with much poorer prognosis such as, adrenocortical carcinoma, pheochromocytoma, metastasis from solid malignancy, and the rare occurrence of primary adrenal lymphoma [1]. The co-occurrence of primary adrenal insufficiency is even more infrequent and requires destruction of 90% of the glands [1]. Diagnosis can be challenging due to nonspecific clinical manifestation and radiological features; and pathological examination is required to confirm the diagnosis [2]. The mainstay of treatment is R-CHOP (rituximab, cyclophosphamide, doxorubicin, vincristine, and prednisone) chemotherapy. The prognosis is generally poor with a median survival of around 1 year [2].

In conclusion, primary adrenal lymphoma can present with large adrenal masses, especially in the presence of primary adrenal insufficiency, and can be mistaken radiologically for adrenocortical carcinoma. Biopsy is imperative to guide therapy.

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