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Case Study

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LYMPHOMA PRESENTING AS BILATERAL ADRENAL MASS

Abhishek Thakur*[1], Saurabh Bawa[1], Hitesh Chanana[1], Nihal Negi[2], Nitesh Kanwar[2], Madan Lal Kaushik[3] and Sanjay Mahajan[3]

[1]Junior Residents, Department of Medicine, Indira Gandhi Medical College, Shimla (H.P.).
[2]Senior Resident, Department of Medicine, Indira Gandhi Medical College, Shimla (H.P.).
[3]Professor, Department of Medicine, Indira Gandhi Medical College, Shimla (H.P.).

***Corresponding Author: Abhishek Thakur**

Junior Residents, Department of Medicine, Indira Gandhi Medical College, Shimla (H.P.).

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ABSTRACT

We present a case of 40 year old male who presented to us with shortness of breath, pain bilateral hypochondrium. Bilateral adrenal lymphoma was the reason for the shortness of breath and pain bilateral hypochondrium.

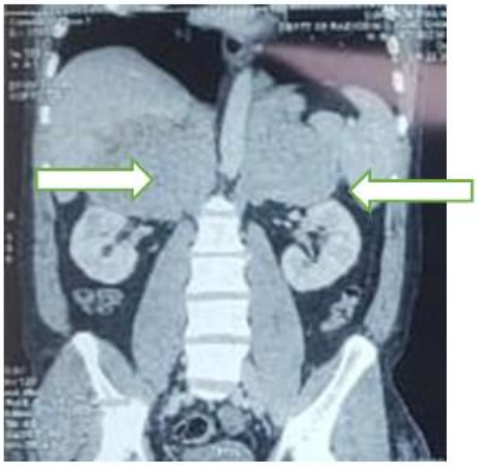
KEYWORD: bilateral adrenal mass, lymphoma.

INTRODUCTION

Adrenal lymphoma is an extremely rare and highly invasive malignant disease. Imaging examination usually shows bilateral adrenal involvement with large tumor masses and local infiltration. However, it is unclear how lymphoma dynamically develops into huge tumor masses in the adrenal glands. The overall survival rate of adrenal lymphoma is generally poor, and the underlying mechanism might be related to prooncogenic mutation but not fully elucidated.[1]

CASE REPORT

A 40 year old male presented to us for shortness of breath, generalized weakness and pain in bilateral hypochondrium. On examination he had pulse rate of 128 beats per minute, blood pressure of 86/60 mmhg, a fluctuating saturation of 86% to 94% at room air. IV fluids were rushed but patient blood pressure didn't respond to IV fluids. On examination chest was clear; In view of low blood pressure, tachycardia and shortness of breath we kept a possibility of pulmonary thromboembolism and planned CT pulmonary angiogram which revealed no e/o PTE. Ultrasound abdomen was also planned in view of pain bilateral hypochondrium which revealed bilateral adrenal enlargement (right adrenal of size 12 cm*5cm and left adrenal 10cm*4.7cm. We kept our first possibility of tuberculosis, second possibility of pheochromocytoma and we ordered hormonal study in view of adrenal involvement and hypotension. Hormonal study revealed serum cortisol -16mcg/dl, serum ACTH-163pg/dl, urine metanephrine-68pcg/dl. We planned CECT Abdomen with adrenal protocol, which revealed large well defined masses seen in the B/L supra renal regions with absolute washout of <60 % and relative washout of < 40 % with abdominal LAP (picture 1).



Picutre 1: Coronal section of bilateral adrenal glands suggestive of large well defined mass (WHITE ARROWS).

First possibility - malignant pheochromocytoma, Second possibility – metastases As our hormonal study was against pheochromocytoma, we planned adrenal gland biopsy which revealed hypercellular round cell tumor with cells arranged compactly in sheets having round nuclei with scant cytoplasm along with frequent mitotic figures which was suggestive of Diffuse Large B-cell lymphoma (Non-GCB type). Immunohistochemistry was done and cells were reactive for CD45, CD99, MUM-1 andC-myc. PET scan was done which revealed metabolically active SUP in a suspected case of DLBLC from adrenal lesion, pet/ ct scan reveals: metabolically active supradiaphragmatic and infradiaphragmatic lymphadenopathy as described above. metabolically active lesions in the left nasopharngeal wall, bilateral tonsillar beds and bilateral adrenal glands. metabolically

active soft tissue lesion in left posterior chest wall and ill-defined soft tissue thickenings in the pericardium, perinephric regions and perirenal fascias. Finding suggestive of lymphoproliferative disorder. Patient was reffered to department of oncology for further management.

DISCUSSION

Adrenal lymphoma is a rare entity.[2] suspicion should be kept if the patient presents with feature of bilateral adrenal mass which doesn't shows feature of other hormonally active tumour like pheochromocytoma, and does not shows adrenal cortical insufficiency. The adrenal glands are frequent sites of secondary lesions of solid tumours, particularly those originating in the breast, lung and kidney and from melanoma.[3] Among the lymphoproliferative neoplasms, non-Hodgkin's lymphomas, particularly DLBCL, are the most commonly identified.[4] Bilateral, bulky masses of adrenal glands are highly suspicious of granulomatous disease, haemorrhage, lymphoma or metastatic lesions.[5] To clarify the aetiology of a nodular lesion of the adrenal gland, a detailed medical history and complete physical examination are needed, as well as biochemical evaluation (to exclude functional tumours) and radiological characterisation. CT scan is the preferred imaging method and, although there are no pathognomonic radiological features of adrenal lymphoma, masses >4 cm with a heterogeneous texture are highly suggestive of malignancy.[6] The definitive diagnosis depends on histopathological diagnosis. Ultrasound/CT scan guided needle biopsy is reserved for selected cases with high clinical suspicion of primary lymphoma or metastatic lesions. Adrenalectomy has been performed mostly when lymphoma was not considered in the initial differential diagnosis and may be a factor that delays systemic therapy in these cases, thereby adversely affecting prognosis.[7,8,9]

CONCLUSION

lymphoma presenting as bilateral adrenal mass is a rare entity but should be considered in the differential diagnosis of bilateral adrenal mass especially when there is evidence of associated adrenal insufficiency. Imaging and analytical study support the diagnosis, but the definitive diagnosis requires histological evaluation. The high suspicion associated with early diagnosis enables appropriate treatment with favourable impact on prognosis.

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