

# Adrenal lymphoma: unusual presentation with unilateral mass and hypoadrenalinism.

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## BACK GROUND

- Adrenal lymphomas are rare and often present with hypoadrenalinism in the context of bilateral adrenal involvement.
- We report a patient with unilateral adrenal mass and hypoadrenalinism at presentation before evolving rapidly to bilateral masses proven to be a large B cell lymphoma.
- We discuss mechanisms of hypoadrenalinism in adrenal lymphoma.

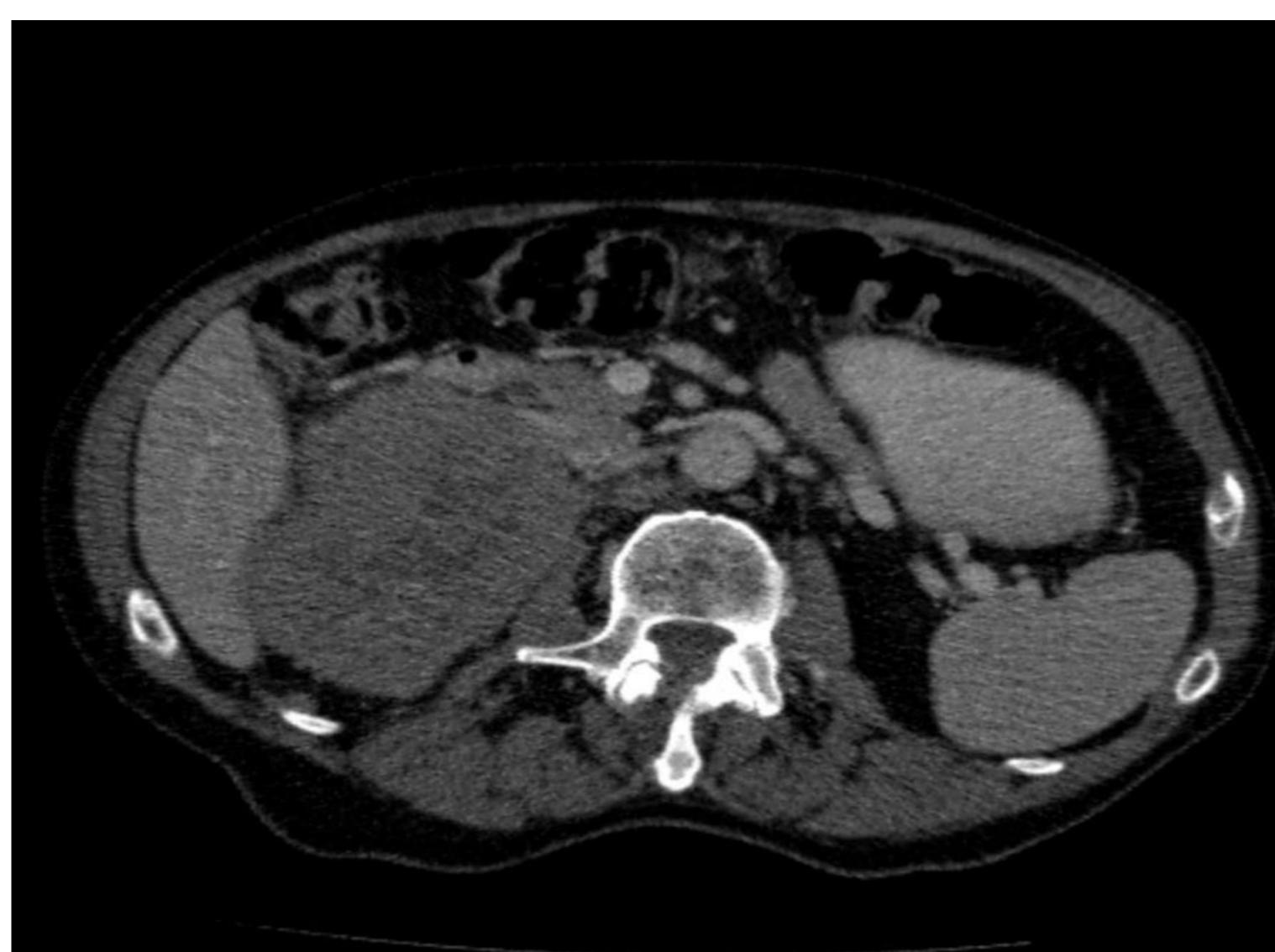
## CASE HISTORY

- A 79 year gentleman with no significant past medical history admitted with a 6 week history of being generally unwell, dizzy and fatigued.
- Physical examination revealed low Blood pressure with postural drop and investigations revealed mild hyponatremia, hyperkalemia and hypercalcemia.
- Random cortisol returned low and failed to respond to synacthen 250mcg .
- CT scan showed a Right sided large 12x10x8cm suprarenal mass with central necrosis suspicious for primary adrenal cancer and the opposite adrenal looked normal.
- He was started on replacement hydrocortisone and his blood pressure improved.
- A subsequent FDG/PET showed disseminated uptake including in both adrenals (with the previously normal left adrenal now grown to x cm) and widespread lymphadenopathy.
- With normal plasma metanephines, a CT guided biopsy of right adrenal was organized and showed diffuse large B cell lymphoma.
- He was started on RCHOP chemotherapy. A repeat CT scan after the 4<sup>th</sup> cycle of chemotherapy showed complete resolution of lymphadenopathy and left adrenal mass and shrinkage of right adrenal to 11x7x3 cm.
- He remains well on replacement hydrocortisone and fludrocortisone.

## RESULTS

Sodium	131 mmol/L
Potassium	6.3 mmol/L
Calcium	2.73 mmol/L
Random Cortisol	117 mmol/L
Short Synacthen	0 minute 116 mmol/L 30 minute 136 mmol/L

## CT ABDOMEN IMAGING



Large unilateral right adrenal mass



Bilateral adrenal masses

## CONCLUSIONS

- Hypoadrenalinism in the context of adrenal masses is often related to near total (>90%) destruction of adrenal cortex.
- Our patients presentation with hypoadrenalinism and unilateral mass is unusual although the opposite adrenal rapidly grew subsequently and responded to chemotherapy for B cell lymphoma.
- Literature review suggest the reason for hypoadrenalinism is believed to be due to either direct invasion of the tumor or cytokine driven functional paracrine effect caused by the lymphoma cells.
- Although its not entirely clear but possible mechanism of hypoadrenalinism in the context of our patient is infiltration and destruction of adrenal glands by lymphoid cells not visible on imaging.

## REFERENCES

- Harada K et al. Intern Med, 2017
- Kasaliwal R et al. Endocr Pract. 2015
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- De Miguel et al. Ecancermedicalscience.2016