Adrenal lymphoma: unusual presentation with unilateral mass and hypoadrenalism.

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BACK GROUND

- Adrenal lymphomas are rare and often present with hypoadrenalism in the context of bilateral adrenal involvement.
- We report a patient with unilateral adrenal mass and hypoadrenalism at presentation before evolving rapidly to bilateral masses proven to be a large B cell lymphoma.
- We discuss mechanisms of hypoadrenalism 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 250 mcg.
- 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 metanephrines, 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 4th 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

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<tbody>
<tr>
<td>Sodium</td>
<td>131 mmol/L</td>
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<tr>
<td>Potassium</td>
<td>6.3 mmol/L</td>
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<tr>
<td>Calcium</td>
<td>2.73 mmol/L</td>
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<td>Random Cortisol</td>
<td>117 mmol/L</td>
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<td>Short Synacthen</td>
<td>0 minute 116 mmol/L</td>
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<td>30 minute 136 mmol/L</td>
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REFERENCES

- Harada K et al. Intern Med, 2017
- Kasaliwal R et al. Endocr Pract. 2015
- Horiguchi et al. Intern Med. 2010

CONCLUSIONS

- Hypoadrenalism in the context of adrenal masses is often related to near total (>90%) destruction of adrenal cortex.
- Our patients presentation with hypoadrenalism 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 hypoadrenalism is believed to be due to either direct invasion of the tumor or cytokine driven functional paracrine effect caused by the lymphoma cells.
- Although it is not entirely clear but possible mechanism of hypoadrenalism in the context of our patient is infiltration and destruction of adrenal glands by lymphoid cells not visible on imaging.