

Thyrotoxicosis Leading to Adrenal Crises Reveals Primary Bilateral Adrenal Lymphoma – Case Report

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Introduction

Amiodarone use may be associated with secondary severe organ dysfunction. Thyrotoxicosis develops in 15% cases. Primary bilateral adrenal lymphoma is a rare malignancy. It frequently presents bilaterally and with symptoms of adrenal insufficiency. Symptomatology for both conditions is nonspecific, especially in the elderly population, and a high suspicion index is necessary to reach appropriate diagnosis.

Case Report

Female gender, 78 year old. Institutionalized. Personal history: Hypertension, Atrial Fibrillation and Diabetes Mellitus for 15 years without complications. Medication: perindopril, amiodarone, simvastatin, metformin, trazodone. She had recently been prescribed antibiotic for UTI complicated by vomiting and hyponatremic hyponatremia. Trazodone was stopped.

Referred to the Emergency Department due to confusion, nausea and vomiting.

She said she did not comply with the prescribed antibiotic for the UTI. At physical examination: diffuse abdominal pain on palpation, slight dehydration. Laboratory: Leucocyturia without leucocytosis, PCR 7,4. Na 125 mmol/l, K 4,56 mmol/l, TSH 0,01 uU/ml, FT4 68 (10-18) pmol/l, FT3 6,34 (4-8) pmol/l, negative anti-TPO and anti-TGL.

Transferred to the Endocrinology ward.

Admitted diagnosis: Urinary tract infection and thyrotoxicosis.

Thyroid US

Heterogenous multinodular goiter. Doppler evaluation showed decreased vascular signal.

Type 2 Amiodarone Induced Thyroiditis

Treatment: Prednisolone 40 mg/d, Tiamazol 30 mg/d. Targeted antibiotic. Maintenance fluids.

Clinical deterioration

Only sepsis? Adrenal Insufficiency?

Fluid resuscitation and hydrocortisone led to amelioration of the hemodynamic instability and clinical improvement, with high dose hydrocortisone requirements for stability.

Nosocomial pneumonia

Fever

Worsening of thyroid function

Sepsis

Hyponatremia, hypoglycemia and vomiting

Adrenal Insufficiency admitted

No clinical conditions to switch/stop hydrocortisone and perform short synacthen.

Abdominal US

Right and left justa-renal heterogenous solid nodules (6,6 and 7 cm respectively) and pleural effusion.

Thoracocentesis

Exudate, no malignant cells.

24h urinary Metanephrines

Within reference range.

Bronchofibroscopy

Endobronchial primary lesion? No malignant cells in the BAL/brushing.

Contrast CT

Suggestion of an endobronchial primary lesion with hepatic and adrenal bilateral secondary deposits. The adrenal lesions were heterogenous masses with areas of necrosis without calcifications with late contrast retention.

Adrenal biopsy?

No safe anatomical route due to no patient collaboration.



Left pleural effusion.



Left side: Ureteral compression, invasion of the kidney and vascular structures.

During the investigation the patient had a favorable course. She was clinically stable, partially oriented, minimally cooperative and reported well being. After this period of seemingly favourable evolution:

Cardiorespiratory arrest.

Autopsy

Primary Adrenal Bilateral Non-Hodgkin lymphoma

Conclusion

Primary adrenal lymphoma is a rare cause of adrenal insufficiency. Although rare it must always integrate the differential diagnosis, specially in the elderly patient where symptoms are subtle and progression is often fast and fatal. Thyrotoxicosis, specially when amiodarone-induced, may be difficult to control rapidly. Transient periods of worsening thyroid function accompany infectious processes. Thyrotoxicosis worsens the adrenal insufficiency picture leading to increased need of substitutive dose requirements and dose adjustments. Mortality rises significantly.