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

C. Roque, R. Fonseca, C. Bello, C. Moniz, R.Ferreira, C. Vasconcelos.
Endocrinology Department - Hospital de Egas Moniz, Centro Hospitalar de Lisboa Ocidental, E.P.E.
Lisbon, Portugal

Centro Hospitalar de Lisboa Ocidental, E.P.E. – Hospital de Egas Moniz

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Introduction

Amiodarone use may be associated with secondary severe organ dysfuntion. 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 nospecific, especially in the elderly population, and a high suspition 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, sinvastatin, metformin, trazodone. She had recently been prescribed antibiotic for UTI complicated by vomiting and hypochloremic hyponatremia. Trazodone was stoped.

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

She said she did not complied 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.

Admitted diagnosis: Urinary tract infection and thyreotoxicosis.

Transfered to the Endocrinology ward.

Thyroid US

Heterogenous multinodular goiter.
Doppler evatuation showed decreased vascular signal.

Type 2 Amiodarone Induced Thyroiditis

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

Clinical deterioration

Nosocomial pneumonia | Fever | Worsening of thyroid funcion
Sepsis | Hyponatremia, hypoglycemia and vomiting

Only sepsis? Adrenal Insufficiency?

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

Adrenal Insufficiency admitted

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

Abdominal US

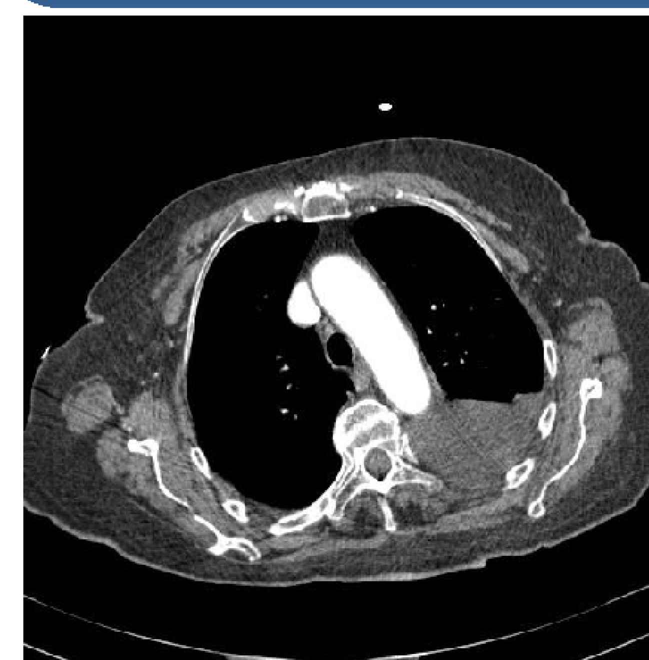
Right and left justa-renal heterogenous solid nodules (6,6 and 7 cm respectively) and pleural effusion.

Thoracocenthesis

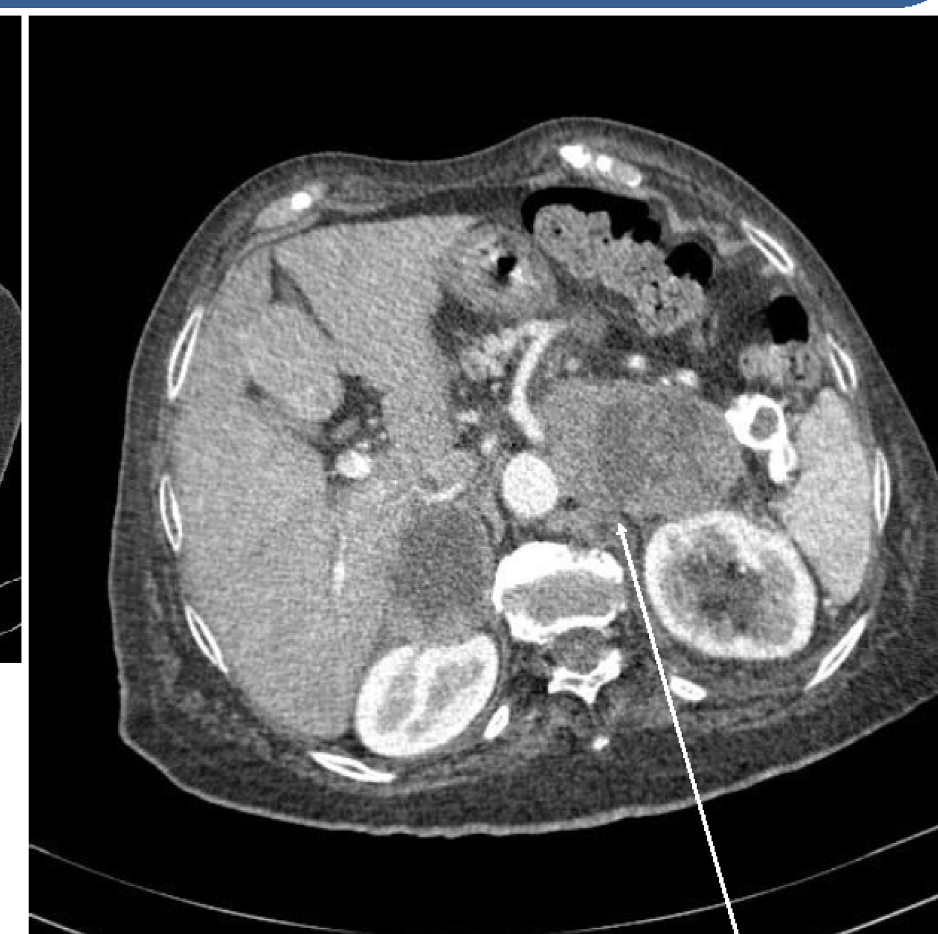
Exudate, no malignant cells.

Contrast CT

Sugestion of an endobronchic primary lesion with hepatic and adrenal bilateral secondary deposits. The adrenal lesios were heterogenous masses with areas of necrosis without calcifications hat late contrast retention.



Left pleural effution.



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

Bronchofibroscopy

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

24h urinary Metanephrines

Withing reference range.

Adrenal biopsy?

No safe anatomical route due to no patient colaboration.

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

Cardiorrespiratory arrest.

Autopsy

Primary Adrenal Bilateral Non-Hodgkin lymphoma

Conclusion

Primary adrenal lymphoma is a rare cause of adrenal insufficiency. Although rare it must allways 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 rapidlly. Transient periods of worsening thyroid funtion acompain infectious processes. Thyreotoxicosis worsens the adrenal insufficiency picture leading to increased need of substitutive dose requirements and dose ajustments. Mortality rises significantly.