中文題目：非典型胸腺類癌以庫興氏症候群為最初表現－ 病例報告

英文題目：Atypical thymus carcinoid with initial presentation of Cushing's syndrome– a case report

作　　者：林怡君[1]，黃麒翰[2]，蘇勤方[3]

服務單位：[1]台北榮民總醫院內分泌新陳代謝科 (第一及通訊作者)，[2]台北榮民總醫院教學部，[3]台北榮民總醫院風濕免疫科

Background

The incidence of Cushing's syndrome (CS, comprising adrenocorticotropic hormone (ACTH) dependent, ACTH independent and iatrogenic CS) is imprecise and maybe underestimate. The confirmation of CS is usually made by typical symptoms like body weight gain, plethora, moon face, supraclavicular fat pad and purple striae and biochemistry testing including elevated urine free cortisol, loss of diurnal cortisol/ACTH level and non-suppressible 1 mg or low dose dexamethasone suppression test. Among ACTH dependent CS, the localization of origin of ACTH is difficult, here, we report a rare case of atypical thymus carcinoid with initial presentation of CS.

Case presentation

A 44-year-old man was presented to endocrine OPD with a complaint of 8-kilograms body weight gain in 6 months. Ruddy, round face and supraclavicular fat pads were detected during physical examination. We started workup of CS and revealed loss of diurnal cortisol/ACTH level and elevated 24-hour urine free cortisol (UFC) up to 2241 ug per day. Due to high ACTH level, ACTH-dependent Cushing's syndrome was suspected. Magnetic Resonance Imaging (MRI) of sella showed negative finding. The dynamic functional tests showed inconsistent results. The ovine-CRH stimulation test didn't show an ACTH increase and high dose dexamethasone suppression test (HDDST) was non-suppressible but DDAVP stimulation test found marked elevated ACTH after injection. Meanwhile, we found a protruding left mediastinum mass by CXR. Further evaluation with chest CT scan was done and disclosed a 7.1x5.6x7.0 cm well-defined mass at the superior anterior mediastinum, with preserved fat plane to major vessels. PET/CT was also arranged as a second modality for functional confirmation and staging, demonstrating an anterior mediastinal lesion with increased FDG uptake.

Due to the fact that CRH test, HDDST, chest CT finding, and PET/CT all indicated ectopic Cushing's syndrome, he was referred to chest surgery department for VATs-anterior mediastinal tumor resection. Pathology report revealed atypical carcinoid tumor of thymus, pT3Nx, Ki-67: 20%, Modified Masaoka Stage III with direct left upper lung invasion and phrenic nerve encasement. After surgery, there were no

symptoms of adrenal insufficiency. The patient recovered well from the surgery and post operation radiotherapy with dose of 5040 cGy in 28 fractions and chemotherapy of Etoposide and Cisplatin were performed.

Conclusion

In ACTH-dependent Cushing's syndrome, differentiation of Cushing's disease (CD) and ectopic ACTH secreting tumor is a challenge to physicians. Cushing's disease which comprised about 85% of ACTH-dependent Cushing syndrome is often first considered rather than ectopic Cushing's syndrome (ECS). Bilateral inferior petrosal sinus sampling (BIPSS) plays an important role in the differential diagnosis between ectopic production of ACTH from carcinoids and Cushing's disease because the former may harbor clinical, biochemical, and radiologic features indistinguishable from CD. An obvious ACTH central gradient by BIPSS is almost pathognomonic in Cushing's disease. Up to 15% of cases have non-pituitary ACTH secreting tumors, in cases of occult ACTH secreting tumors, about 27%-48% were bronchial carcinoids by different series with rapid growing in US in recent 30 years. However, the accurate diagnosis and localization of ectopic ACTH secreting tumor often delayed for 20 years.

In this case, we skip BIPSS because the visible tumor first detected by CXR and anatomically, functionally diagnosed by chest CT and whole body PET/CT respectively. The pathology confirmed atypical carcinoid tumor of thymus. A careful review of patient's image including CXR, CT is mandatory to shorten the time of diagnosis.