Thymic carcinoid tumours

Isabel Parra MD[1], Antonia Remacha MD[2],
Serafín Costilla DD[3], José Antonio Santos Calderón MD[4]

I Parra, A Remacha, S Costilla, JAS Calderón. Thymic carcinoid tumours. Can Respir J 2002;9(3):215-216.

Carcinoid tumours of the thymus are rare. The case of a 57-year-old asymptomatic man with a carcinoid tumour of the thymus, who showed a widened mediastinum by chest x-ray, is presented. Fine needle aspiration suggested the diagnosis, which was confirmed by biopsy.

Key Words: *Mediastinal mass; Thymic carcinoid tumour*

Les tumeurs carcinoïdes du thymus

RÉSUMÉ : Les tumeurs carcinoïdes du thymus sont rares. Le cas d'un homme asymptomatique de 57 ans atteint d'une tumeur carcinoïde, qui présentait un élargissement du médiastin aux rayons X, est décrit. Une aspiration à l'aiguille a mené au diagnostic, qui a été confirmé par biopsie.

CASE PRESENTATION

A 57 year-old man was referred to the Department of Respiratory Medicine at the Hospital Monte San Isidro, León, Spain, because a widened mediastinum had been incidentally discovered in a chest x-ray taken during a routine medical examination. He had suffered from no serious illnesses apart from hepatitis of unknown etiology and had smoked 20 cigarettes/day for 20 years. He had no symptoms, and results of a physical examination were normal.

The hemogram and screening biochemistry results were normal, as were his levels of alpha-phetoprotein, carcinoembryonic antigen and CA 19-9. Urinary vanilmandelic acid and 5-hydroxindolacetic acid levels were also normal.

A bronchoscopy and transbronchial pulmonary biopsy were performed, which revealed a normal bronchial tree and normal microscopy of pulmonary parenchyma, with negative cytology and cultures of the bronchial aspiration.

A computed tomography scan of the thorax, abdomen and pelvis revealed a mass in the anterior mediastinum (Figure 1) characterized by uneven and clearly defined edges; it measured 10 cm in diameter, was highly vascular and contained calcification. The mass was in contact with the heart, the ascending aorta, the arch of the aorta and the trunk of the pulmonary artery, displacing them dorsally. The pulmonary parenchyma, liver, spleen, pancreas and kidneys were normal. No adenopathies were identified.

Fine needle aspiration was suggestive of a carcinoid tumour with positive neuroendocrine markers (chromogranin and neuron specific enolase). The diagnosis was corroborated in a biopsy obtained through a left anterior mediastinotomy, in which a moderate atypia was observed (Figures 2, 3).

The patient was unable to undergo surgical intervention, because the great vessels were affected. At present, he is being treated with chemotherapy (cisplatin and etoposide) as an outpatient.

Departments of [1]Respiratory Medicine and [2]Microbiology, Hospital Monte San Isidro; [3]Department of Radiology, Hospital of León; [4]Department of Internal Medicine, Hospital Monte San Isidro, León, Spain
Correspondence: Dr Isabel Parra Parra, Department of Respiratory Medicine, Hospital Monte San Isidro, Avda de Asturias s/n 24008 León, Spain. Telephone +349-87227250, fax +349-987243252, e-mail isabelparra@hotmail.com

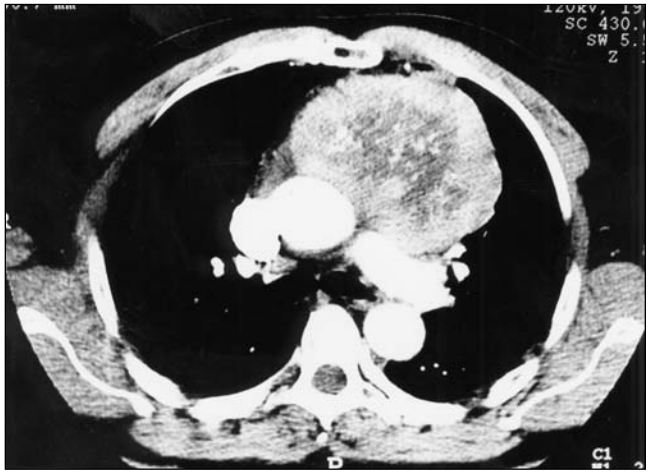


Figure 1) *A chest computed tomography scan showing a mediastinal mass with calcification*

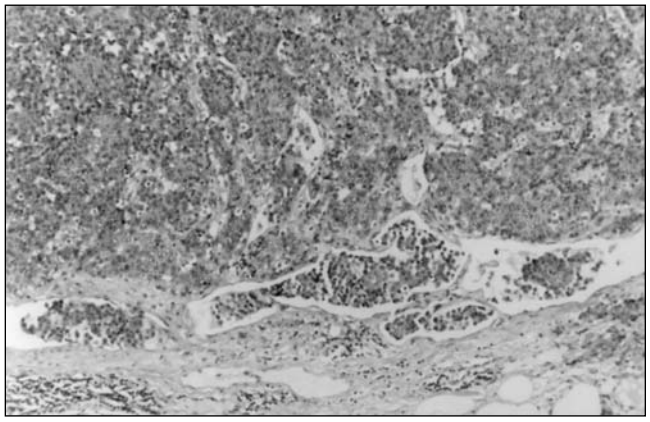


Figure 2) *Solid ribbons and nests of small, uniform cells, with lymphatic invasion. (Hematoxylin and eosin stain, original magnification ×300)*

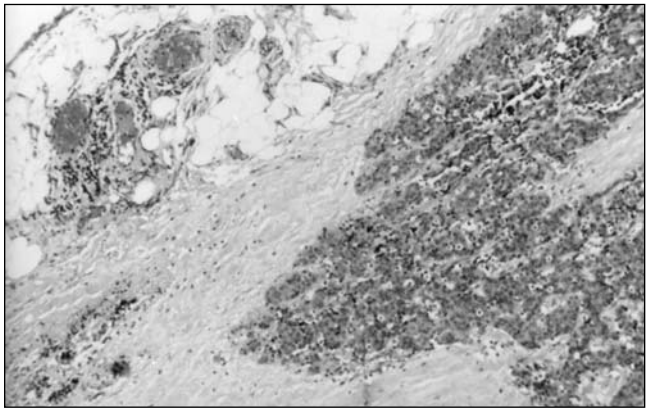


Figure 3) *Infiltration of mediastinal fat; also shown are thymic remnants. (Hematoxilin and eosin, original magnification ×300)*

DISCUSSION

Thymic carcinoid tumours are rare. Since Rosai and Higa (1) distinguished it from thymoma in 1972, slightly more than 100 cases have been described in the literature (2). This primary neoplasm, also termed primary neuroendocrine carcinoma of the thymus (3), predominantly affects males (in a ratio of 3:1) mainly between the ages of 40 and 60 years (3).

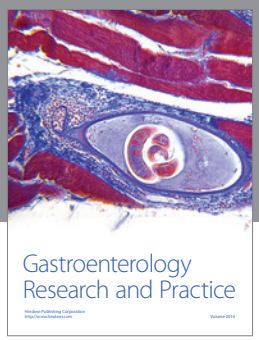
Approximately one-third of patients do not have any symptoms when diagnosed. These tumours are discovered by chance when the patients undergo x-rays of the thorax for another reason, as in the present case. Another one-third of patients present with associated endocrinopathies such as Cushing's syndrome or multiple endocrine neoplasia types I and II. Other symptoms may be present if the tumour is large, and compresses or invades adjacent structures, causing thoracic pain, dyspnea, cough and superior vena cava obstruction syndrome (4). Rarely, it is associated with a carcinoid syndrome (5).

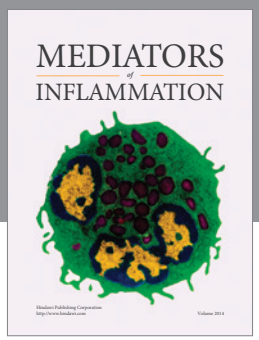
Classification of the tumour into three grades has been proposed: well-differentiated, moderately differentiated or atypical (the most frequent) and poorly differentiated (small cell carcinoma) (6). In this patient, the thymic carcinoid tumour was moderately differentiated.

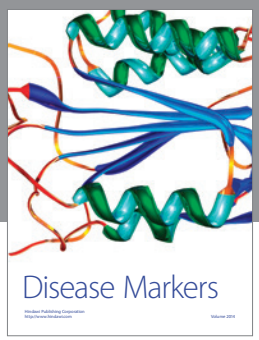
Surgical removal is the treatment of choice for thymic carcinoid tumours, but local invasion and metastasis is frequent, even after surgery (7,8). The prognosis is poor, and if the tumour is associated with Cushing's syndrome or multiple endocrine neoplasia, the prognosis is even worse (9,10).

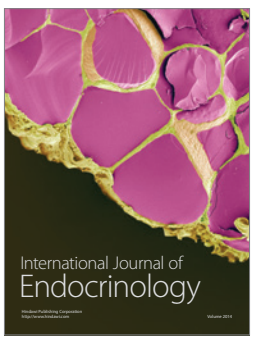
REFERENCES

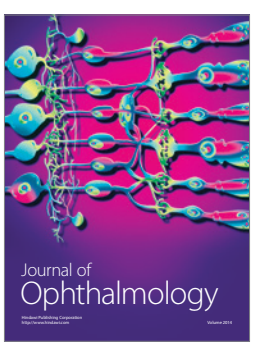
1. Rosai J, Higa E. Mediastinal endocrine neoplasm, of probable thymic origin, related to carcinoid tumor: clinicopathologic study of 8 cases. Cancer 1972;29:1061-74.
2. Martínez Cerezo FJ, Garreta J, González T, Pardina M, Gallet P, Miralbés M. Carcinoide tímico asociado al síndrome de neoplasia endocrina múltiple tipo I. Med Clin (Barc) 1996;106:21-3.
3. Moran CA, Suster S. Neuroendocrine carcinomas (carcinoid tumor) of the thymus. A clinicopathologic analysis of 80 cases. Am J Clin Pathol 2000;114:100-10.
4. Wick MR, Scott RE, Li C-Y, Carney JA. Carcinoid tumor of the thymus: a clinicopathologic report of seven cases with a review of the literature. Mayo Clin Proc 1980;55:246-54.
5. Gregori J, Martín A, Fernando J, Cepeda JM. Carcinoide tímico: presentación de un caso. Med Clin (Barc) 1987;89:305-6.
6. Rosado de Christenson ML, Abbott GF, Kirejczyk WM, Galvin JR, Travis WD. Thoracic carcinoids: radiologic-pathologic correlation. Radiographics 1999;19:707-36.
7. De Montpréville VT, Macchiarini P, Dulmet E. Thymic neuroendocrine carcinoma (carcinoid): a clinicopathologic study of fourteen cases. J Thorac Cardiovasc Surg 1996;111:134-41.
8. Wang DY, Kuo SH, Chang DB, Yang PC, Lee YC, Hsu HC. Fine needle aspiration cytology of thymic carcinoid tumor. Acta Cytol 1995;39:423-7.
9. Fukai I, Masaoka A, Fujii Y, et al. Thymic neuroendocrine tumor (thymic carcinoid): A clinicopathologic study in 15 patients. Ann Thorac Surg 1999;67:208-11.
10. Muñoz AI, Calvo E, Llorente E, et al. Tumor carcinoide de timo secretor de ACTH. Presentación de un nuevo caso. An Med Interna 1995;12:189-91.

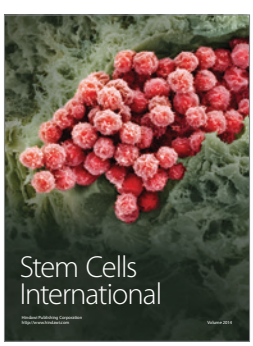


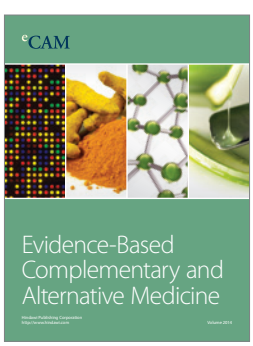


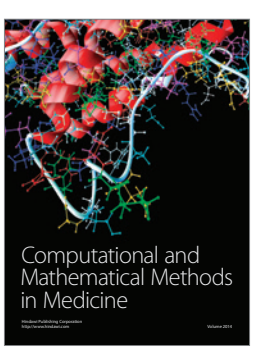


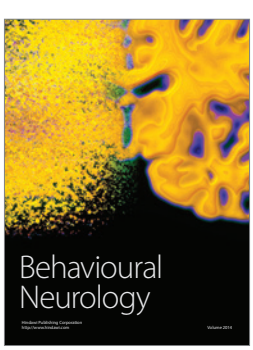


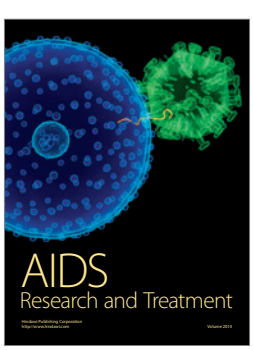


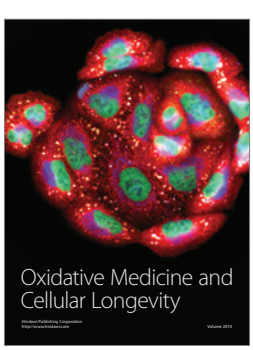












Hindawi

Submit your manuscripts at
http://www.hindawi.com