CASE REPORT

Adult cervical thymus revealed by thyroid medullary carcinoma

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Abstract

A 64-year-old man presented with elevated thyrocalcitonin, and a history of resected thyroid medullary carcinoma. Cervical thymus was detected incidentally in the neck dissection resection specimen for thyroid medullary carcinoma extension. This case was peculiar due to the presence of a thymic microcyst and the coexistence of parathyroid tissue along with the thymic lobules. Persistent hypocalcaemia, requiring calcium intake, occurred after resection. Although rare, the presence of such neck branchial arch abnormalities should be considered for a successful management of extensive malignant thyroid tumours.

Key words: Cervical thymus, branchial arch abnormally, thymic cyst, medullary carcinoma, thyroid, parathyroid

INTRODUCTION

Cervical thymus can be revealed by thyroid tumours although very rarely. Two cases, one in an paediatric and one in an adult patient, revealed by thyroid papillary carcinomas have been reported in recent years.1,2 Here we report a case in which cervical thymus was diagnosed incidentally on the neck dissection resection specimen for thyroid medullary carcinoma extension. This case was peculiar due to the presence of a thymic microcyst and the coexistence of parathyroid tissue along with the thymic lobules at contact of the thyroidectomy scar. The latter finding was clinically relevant since persistent hypocalcaemia, requiring calcium intake, occurred after resection.

CASE REPORT

A 64-year-old man presented with elevated thyrocalcitonin (3525 pg/ml, calcemia 2.2 mmol/l). The patient’s history revealed right arm fractures (age of 25), thoracic angiomas, L2L3 left lombosciatics (10.5 months previously), as well as thyroid medullary carcinoma (T3N1Mx, treated by thyroidectomy with right recurrent nerve resection and bilateral recurrent lymph node resection, no parathyroid being observed on the specimen but perithyroid tumour nodules, 4.5 months previously). The patient’s postoperative treatment consisted in Levothyrox 125 μg, the F-DOPA PET scan showing three hypermetabolic foci: two paratracheal and one sub-careanar/right lung hilus. Resections of the mediastinorecurrent as well as of the pretracheal and suprasternal tissues were performed and analyzed entirely microscopically.

Medullary thyroid carcinoma nodules (the largest being of 18 mm) were observed in the 2.2 cm right mediastino-recurrential resected specimen. On the pretracheal and suprasternal specimens (measuring 5.5x2 cm) there were, besides some medullary thyroid carcinoma nests (measuring less than 3 mm) also thymic lobules and parathyroid tissue (Figure 1). The thymic tissue showed a 3.5 mm benign epithelial cyst. Fibrotic tissue with reparation granuloma was seen at proximity of the thymic and parathyroid tissues without contact or altering their structure (Figure 1).

Postoperatively the patient showed persistent hypocalcaemia (1.82 mmol/l), treated by calcium (3000 mg/day), persistent at 9 months postoperatively. Postoperative thyrocalcitonin was 609 pg/ml, rose at 750 pg/ml at 9 months postoperatively. On ultrasound exam, at 11 months postoperatively, there was a suspect right zone III adenopathy but without vascularisation at Doppler.
DISCUSSION

Here we report a case of cervical thymus, peculiar by an extremely rare classical diagnosis circumstance: presence of a malignant thyroid tumour. In the present case, the ectopic thymus was revealed by the neck resection specimen for medullary thyroid carcinoma extension, cervical thymus being usually revealed by thymic macrocysts or tumours. Although of limited clinical relevance in the present case, presence of thymic cysts should be acknowledged since associated thymoma or thymic carcinoma may be discovered incidentally. We also identified parathyroid tissue at contact to the thymic lobules, the parathyroid tissue representing possibly a descended inferior parathyroid, but as part of a branchial arch abnormality since it is located at contact to thymic tissue. The clinical evolution of the patient was in agreement with this hypothesis, hypocalcaemia requiring calcium intake occurring only after resection of this parathyroid and not initially, after the total thyroidectomy. Although rare, presence of such neck branchial arch abnormalities should be considered for a successful management of extensive malignant thyroid tumours.

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