Correspondence

High serum levels of calcitonin are not pathognomonic of medullary thyroid carcinoma and may indicate polyglandular autoimmune syndrome III

To the Editor: Nuclear medicine plays a major role in the diagnostic assessment and postoperative work-up of medullary thyroid carcinoma (MTC) by measuring serum calcitonin (CT) by either radioimmunoassay (RIA) or by immunoradiometric assay (IRMA). Calcitonin is a polypeptide hormone composed of 32 aminoacids secreted by thyroid C-cells [1]. A number of radiopharmaceuticals are available to detect either primary or metastatic MTC sites before or after primary surgery [2-6]. Increased serum CT is a highly sensitive tumour marker for the detection of MTC, but has a low specificity for this tumour [1]. Several physiologic and pathologic conditions other than MTC have been associated with increased levels of CT, such as sex, age, physical activity, chronic use of omeprazole or omeprazole-like drugs, of glucocorticoids, of beta-blockers, etc, and also hypercalcaemia, hypergastrinemia, neuroendocrine tumours, renal insufficiency and papillary and follicular thyroid carcinoma [1].

We had a case of a 38 years old Greek woman with type I diabetes mellitus and Hashimoto's thyroiditis, and serum CT 110pg/mL measured by RIA (normal value: <10pg/mL). The patient did not have MTC. Her medical history included a single thyroid nodule with 4mm diameter which had been diagnosed 9 months earlier. Her family medical history was unremarkable. The patient underwent a careful investigation in order to rule out pathologic conditions associated with increased levels of CT other than MTC [1]. This investigation revealed autoimmune gastritis with high fasting serum gastrin levels (480pg/mL) measured by RIA (normal value: <100pg/mL), positive serum autoantibodies to parietal cells and also to intrinsic factor, vitamin B12 deficiency measured by RIA (154pg/mL) and atrophy of the gastric corpus section in order to rule out pathologic conditions associated with increased levels of CT, such as sex, age, physical activity, chronic use of omeprazole or omeprazole-like drugs, of glucocorticoids, of beta-blockers, etc, and also hypercalcaemia, hypergastrinemia, neuroendocrine tumours, renal insufficiency and papillary and follicular thyroid carcinoma [1].

In conclusion, differential diagnosis of hypercalcitome-
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Bibliography


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Hercules knot

Macedonians considered as one of their ancestors the hero Hercules. The first Macedon according to Isiodos - 7th century b.C., had Jupiter as his father and Hellina the Greek as his uncle.