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Thymic neuroendocrine carcinoma (carcinoid): What if octreotide scanning is negative?

To the Editor:

I was interested to read Filosso and colleagues' recent description¹ of a case of thymic neuroendocrine carcinoma (carcinoid) successfully treated with neoadjuvant radiotherapy and chemotherapy and the somatostatin (sst₂) analog octreotide. Filosso and colleagues¹ stated, "Neuroendocrine tumors, including thymic tumors, express sst₂ at immunohistochemistry." Other than octreotide scanning and computed tomography or magnetic resonance imaging (which were clearly useful in their case), they did not discuss other methods of localizing these tumors. This gives the impression that all thymic neuroendocrine carcinomas may be detected with octreotide scanning. However, although others have also reported octreotide scanning to be of use in detecting thymic neuroendocrine tumors,^{2,3} this is not always the case. A recent case series found none of 12 cases to have positive results for sst₂ receptors.⁴ Thus if results of octreotide scanning are negative, other methods may be needed for accurately localization of both the primary tumor and any metastases to treat cases of thymic neuroendocrine carcinoma as successfully as did Filosso and colleagues.¹ Other such methods that may be useful are positron emission tomographic scanning with fluorodeoxyglucose labeled with fluorine 18 and

scanning with metaiodobenzylguanidine labeled with iodine 123.^{4,5} In 2 cases briefly reported from Guy's Hospital,⁵ 1 patient underwent octreotide scanning, with negative results. However, positron emission tomographic scanning localized metastases, and radiolabeled metaiodobenzylguanidine was used to treat these metastases.

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Reply to the Editor:

I thank Whitaker for his interest in our recently published article.¹ The message of this article was the feasibility and the efficacy of a multidisciplinary (chemoradiotherapy, surgery, and biologic therapy)

treatment for a giant and biologically aggressive thymic neuroendocrine tumor.

The patient underwent preoperative octreotide scintigraphy with positive results, the in vivo demonstration of the somatostatin receptors presence in the neoplastic tissue. It is widely known that neuroendocrine tumors can have negative results of octreotide scintigraphy; in my own experience, I have observed several bronchial carcinoids (both typical and atypical) with negative results of octreotide scintigraphy and without somatostatin receptors in surgical specimens. In some of these cases, positron emission tomographic (PET) scan results were positive. Probably these cases represent a more aggressive variant of neuroendocrine neoplasm, but further reports are needed to confirm this hypothesis.

I agree with Whitaker's suggestion to use PET scan when results of octreotide scintigraphy are negative in the preoperative patient assessment. One must consider, however, that PET scan is not widely available in my country, and the cost of this procedure is still high. Had the patient I described had negative results of octreotide scintigraphy, I definitely would have considered PET or metaiodobenzylguanidine scanning.

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