Dysphagia and dysphonia in a woman with a previous breast cancer

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Metastasis to the thyroid occur infrequently. The overall incidence in autopsy series vary from 0-5% in unselected cases to 24% in patients with a known malignancy. They usually occur when there are another metastases, sometimes many years after diagnosis of the original primary tumour. We present the case of a woman with dysphagia and dysphonia due to a thyroid mass as first manifestation of a metastatic breast cancer.

Key words: thyroid metastases, fine needle aspiration cytology, thyroid nodules, total thyroidectomy.

CASE REPORT

A 45 year old woman with previous history of carcinoma breast cancer, presented with a fast growing left thyroid mass and progressive hoarseness, dysphonia and dysphagia. She had been diagnosed in 2005 of a pT3, pN2, M0 (stage IIIA) breast cancer (estrogen and progesterone receptors negative and c-erb-B2 negative too) and underwent total mastectomy, chemotherapy (FEC-90 regimen for six cycles) and radiation therapy.

In August 2005, she was admitted to the Department of Laringology and Otology due to exacerbation of dysphagia and dysphonia from 1 month of evolution. On admission, the physical exam was unremarkable except for a left neck mass. The laboratory data indicated no evident abnormalities. Serum triiodothyronine and serum thyroxine were normal and serum thyroid-stimulating hormone was a little low (0.347 U/ml; normal value 0.350-4.840). Tumoral markers were normal. A chest roentgenogram revealed no parenchymal abnormality. There were no clinical or laboratory signs of an active inflammatory process. A computed tomographic (TC) scan of the cervical area, the thorax and the abdomen showed an increase volume of the left thyroid lobule with some nodules inside it, which reduced the diameter of the trachea (fig. 1) and extended to the superior mediastinal space (fig. 2), and multiple bilateral lung and hepatic nodes similar to metastases. A fine needle aspiration
cytology (FNAB) of cervical nodes was suggestive of a primary thyroid malignancy (it showed malignant epithelial cells with features which suggested thyroid carcinoma in a background of benign thyroid epithelial cells and colloid) and a FNAB of the thyroid mass was normal. As symptoms increased and results were different between FNAB of cervical nodes and FNAB of the thyroid mass, the patient was made a thyroidectomy and left cervical nodes were removed too. The biopsy revealed the presence of malignant breast cancer inside the thyroid and inside 17 of a total of 25 cervical removed nodes. A new blood test showed increase levels of CA 15.3, ALT, AST, GGT and LDH (30, 50 UI/mL, 54 U/L, 52 U/L, GGT 70 U/L and 850 U/L respectively). The patient received systemic chemotherapy with paclitaxel and gemcitabine regimen every 15 days and, after the second cycle, she was diagnosed of carcinomatous lymphangitis and died two weeks after with respiratory failure.

CONCLUSION
Metastatic disease to the thyroid is found only infrequently. Thyroid metastases may occur 0-5% in unscreened patients and in more than 24% of patients with widespread malignant neoplasms at autopsy. Some post-mortem studies suggest that secondary tumours in the thyroid gland can be up to 10 times as common as primary thyroid cancer. From numerous autopsy series, it seems that cancer of the breast, lung and malignant melanoma are the most frequent malignancies to metastatize to the thyroid. These metastases were clinically occult. By contrast, most reported clinical series have shown that renal cell carcinoma is the most common primary tumour to produce symptomatic thyroid metastases, closely followed by breast and lung cancer.

Kim TY et al reported clinical studies in which breast cancer was the most likely primary site, although any distant cancer could be responsible. Wood et al reported series in which 27% of patients with thyroid metastases had renal carcinoma. Here we report an example of symptomatic thyroid metastases of breast cancer. In this case, the free interval between the diagnosis of the primary tumour and the diagnosis of the thyroid metastases was 50 months. Mc Cabe et al suggested that when a patient has a history of cancer, even when the primary tumour has been removed completely, a mass in the thyroid gland should be treated as a metastatic lesion until it could be possible to demonstrate another origin. In our case, the mass was removed because the fine needle aspiration cytology was not concluyent and because of the presence of severe symptoms. The pathology exam revealed it was due to metastases of breast cancer. Fine needle aspiration cytology diagnosis may help to avoid unnecessary thyroidectomy in patients with a poor prognosis if it shows that the mass is a breast cancer metastasis, but in this case, an aggressive surgical approach was necessary.

Usually patients with metastasis to the thyroid have poor prognosis and do not respond to conventional therapy. This kind of treatment could achieve survival gain especially in patients with metastases from breast or colon cancer. Radical treatment for an isolated metastasis to the thyroid gland can be curative, particularly from renal cell carcinoma. There is no consensus, but it is recommended a thyroid lobectomy and/or isthmectomy in the case of a solitary metastasis and a total thyroidectomy if thyroid metastases are bilateral.

In Wood’s et al series, one patient with thyroid metastasis secondary to melanoma, was treated just with immunotherapy but died with hoarness and dyspnea some months after. Three patients in this series were treated with radiotherapy as monotherapy and the thyroid disease was controlled. One patient with a metastatic leiomyosarcoma sized 6 cm, had a near complete response after a fractionated dose of 55 Gy of radiotherapy administered during 3 weeks. However, in Kim et al’s series, two patients with thyroid metastasis, one with colon cancer and other with esophageal cancer, were treated with radiotherapy, with none of them had clinical benefit.

Most of patients with thyroid metastases have widespread metastatic disease and occasionally the thyroid could be the only site of disease. In this case the tumour had spread to lungs and liver, so that, if there had not been any symptoms, it should not have been necessary surgery as a method of treatment. This case emphasizes the value of clinical information and the importance of cytologic interpretation of any thyroid node in people with a previous history of cancer. As there is nothing to differentiate thyroid metastases from primary thyroid cancer clinically, fine needle aspiration cytology (FNAC) could be useful. It has low morbidity, low cost and high negative predictive value. However, in Wood’s series in 9 of 15 patients, histological diagnosis was based on the thyroidectomy specimen, with surgery also providing effective treatment. In this case, just surgery let know the diagnosis of metastases of breast cancer and fine needle aspiration cytology was not good for this diagnosis.

References