

Localization of cervical lymphadenopathy due to colorectal adenocarcinoma metastasis to the thyroid with intraoperative ultrasound[☆]



Localización con ecografía intraoperatoria de adenopatías cervicales secundarias a metástasis tiroidea de adenocarcinoma de colon

We report the case of a 51-year-old female patient who had undergone sigmoidectomy for adenocarcinoma (T3 N1 M0) and adjuvant chemotherapy (CT) and had metastatic disease five years after the initial diagnosis. Computed tomography (CT) showed metastases in the right thyroid lobe (RTL), the tail of the pancreas, and the left lower lobe of the lung, which were confirmed by positron emission tomography (PET). The patient was euthyroid, and the physical examination was normal. Neck ultrasound examination showed a hypoechoic, calcified nodule in the RTL. Fine needle aspiration (FNA) suggested papillary thyroid carcinoma versus metastases from colon adenocarcinoma.

CT was administered, and imaging tests after three years of follow-up showed a reduction in the pulmonary lesion and the disappearance of the pancreatic lesion. The thyroid nodule remained stable, however, and suspicious adenopathies were found in the right carotid-jugular region in a control ultrasound examination. After an evaluation of the case at a multidisciplinary session, both total thyroidectomy and central and right lateral lymphadenectomy were performed. A radiologist who specialized in the thyroid gland performed an intraoperative ultrasound examination before incision to confirm the localization of the suspicious adenopathies. Repeat ultrasound examination after lymphadenectomy showed a persistent suspicious adenopathy in a higher localization of level II, which had been overlooked and this was excised. The histological examination was consistent with a thyroid metastasis from colon adenocarcinoma, with two positive lymph nodes out of the 25 excised, one of them being the one located by intraoperative ultrasound examination. The patient recovered uneventfully and, after one year of follow-up, she is currently receiving adjuvant therapy and there has been no evidence of thyroid recurrence.

Metastases account for only 1.4–3% of all thyroid malignancies.^{1–3} They should however be considered in any differential diagnosis of patients with a thyroid lesion and a history of cancer at another location.

Some authors state that the number of cases of metastatic disease in the thyroid gland has increased in recent years.⁴ The primary tumors most commonly metastasizing to the thyroid gland are the renal cell (48.1%), colorectal (10.4%), lung (8.3%), and breast tumors (7.8%).⁵ Other less commonly associated tumors include sarcoma,

neuroendocrine tumors, and melanoma. Gastric cancer and nasopharyngeal carcinoma have been more frequently reported in Asian countries. The mean interval between the diagnosis of primary tumor and the occurrence of thyroid metastasis ranges from 53 to 69 months.^{4,5}

The female to male ratio is 1.4:11.⁵ Patients are usually euthyroid at diagnosis. Some series have reported 72% of clinically palpable nodules.⁶ Diagnosis may be performed using CT and/or PET, but should be confirmed by ultrasound-guided FNA of the lesion, which allows for a diagnosis in more than 90% of cases with 94% sensitivity and 100% specificity.⁴

Intraoperative ultrasound examination has been shown to be a helpful procedure for localizing recurrences in repeat thyroid cancer surgery, in which scar tissue in the thyroid cell may make localization difficult, especially in the event of nonpalpable recurrences, a history of external radiation therapy, and recurrences in a paratracheal localization with invasion of the trachea and thyroid cartilage.^{7,8} Agcaoglu et al.⁹ used intraoperative ultrasound to confirm the absence of residual disease after modified radical lymphadenectomy in thyroid cancer. They reported that intraoperative ultrasound identified 16% of the lymph nodes overlooked during surgery, most of them located low in level IV, high in level II, and posteriorly in level V. This is similar to what occurred in our case, where an adenopathy located much higher in level II had been overlooked.

Thyroidectomy for thyroid metastases is controversial due to the lack of prospective studies, although surgical resection may be helpful in selected cases. Some studies have shown higher survival rates in patients undergoing thyroidectomy as compared to nonoperated patients.^{1,2,6} Hegerova et al.⁴ recently published a study of 91 patients with thyroid metastases. The mean survival time was 30 months in operated patients, as compared to 12 months in nonsurgical patients. This difference could have been due to the fact that patients with more limited metastatic disease were selected for surgery.

In conclusion, we recommend that the selection of patient candidates for surgery should be the responsibility of a multidisciplinary team. We also think that intraoperative ultrasound examination may be of value for localizing nonpalpable lesions and for confirming the absence of any residual lesion after surgery, particularly repeat surgery.

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