

# Metastases from Rectum and Thyroid Cancers in Same Cervical Lymph Node

## – A Case Report –

Bulent Yildiz · Abdulkadir Reis<sup>1</sup>  
Evren Fidan · Feyyaz Ozdemir  
Halil Kavgaci · Fazil Aydin

Departments of Medical Oncology and  
<sup>1</sup>Pathology, Karadeniz Technical  
University Faculty of Medicine,  
Trabzon, Turkey

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### Corresponding Author

Bulent Yildiz, M.D.  
Department of Medical Oncology, Karadeniz  
Technical University Faculty of Medicine,  
Trabzon 61080, Turkey  
Tel: +90-462-377-5023  
Fax: +90-462-325-0518  
E-mail: drbulentyildiz@hotmail.com

An excisional biopsy targeting a cervical lymph node was performed on a 49-year-old female patient with metastatic rectal cancer. The biopsy revealed rectal and papillary thyroid cancer metastasis in the same lymph node. A thin-needle thyroid aspiration biopsy was performed, and the result was papillary thyroid carcinoma. The patient, who received chemotherapy for the metastatic rectal cancer, died due to disease progression about 5 months after a secondary primary tumor was detected. Metastasis of multiple malignancies in the same lymph node is extremely rare. A metastases of rectal and thyroid cancers to the same lymph node has not been reported until now. Our patient is the first case in the literature.

**Key Words :** Lymph nodes; Neoplasm metastasis; Rectum; Thyroid gland; Neoplasms

Detecting two primary tumors concurrently is uncommon. In a study by Lee *et al.*,<sup>1</sup> 8,428 autopsies were performed in a period of 17 years (1,870 of the cases had known cancer), and multiple primary cancer cases accounted for 0.8% of all subjects, while this rate was 3.6% for known cancer cases. Metastasis of multiple tumors to the same lymph node is an extremely rare condition. Co-occurrence of rectal and papillary thyroid cancers has been reported in one case in the literature, whereas a case with metastasis of these two malignant tumors in the same lymph node has not been described until now.<sup>2</sup>

## CASE REPORT

A 49-year-old female presented to our hospital with rectal bleeding in 2001. An ulcerated mass was detected by colonoscopy at 3 cm in the rectum and the result of the biopsy was adenocarcinoma. An abdominoperineal resection was performed

with no metastasis found. With a diagnosis of locally advanced rectal cancer, adjuvant 5-fluorouracil (5-FU)-leucovorin and concomitant radiotherapy were administered postoperatively. When lung metastasis was detected in the second year of follow-up, irinotecan plus infusional 5-FU/leucovorin chemotherapy regimen was initiated, but this regimen was withdrawn due to disease progression after four cycles of treatment and a capecitabine plus oxaliplatin chemotherapy regimen was initiated. After six cycles of treatment, the patient was placed in follow-up due to a stable disease response. At the sixth month of follow-up, the patient presented with a painful and gradually growing mass in the right cervical region. A physical examination revealed 2 × 2 cm lymphadenopathy in the right posterior cervical region, so an excisional biopsy was performed. A rectal adenocarcinoma metastasis and adjacent papillary thyroid carcinoma metastatic foci were detected following examination of a pathological specimen (Fig. 1). An immunohistochemical examination revealed that carcinoembryonic antigen was strongly positive

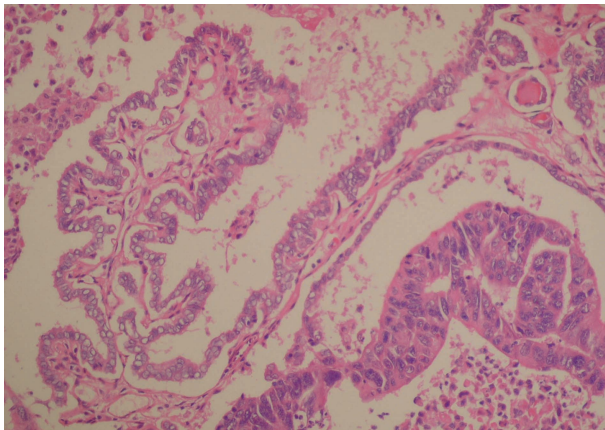


Fig. 1. Thyroid papillary carcinoma near a rectal adenocarcinoma in the same cervical lymph node.

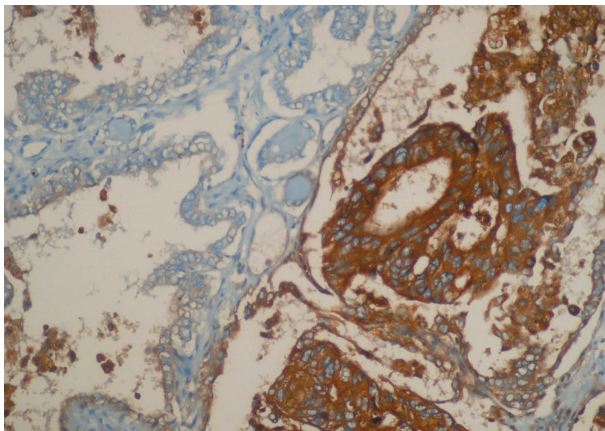


Fig. 2. Positive cytoplasmic immunohistochemical staining for carcinoembryonic antigen of the rectal adenocarcinoma in the same cervical lymph node.

(Fig. 2) in the region of the rectal adenocarcinoma metastasis, and that HBME-1 was positive (Fig. 3) in the region of the papillary thyroid carcinoma metastasis. Two nodules were detected in the right thyroid lobe by ultrasonography. Thyroid function tests were within normal ranges, and hypoactive nodules were detected with scintigraphy. A thyroid thin-needle aspiration biopsy was performed on the  $2 \times 1.5$  cm nodule. The biopsy result revealed papillary thyroid carcinoma. A computed tomography examination was performed, and lung, brain, liver and generalized bone metastases were detected. Radiotherapy was performed to the whole cranium. A chemotherapy regimen of oxaliplatin plus infusional 5-FU/leucovorin was initiated after the radiotherapy. However, progression was observed under this treatment, and the patient died 3 months later.

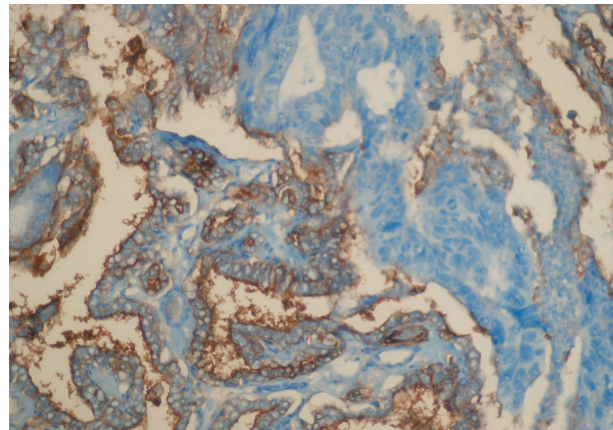


Fig. 3. Positive membranous immunohistochemical staining for HBME-1 of the thyroid papillary carcinoma in the same cervical lymph node.

## DISCUSSION

Co-occurrence of two malignancies is a rare condition, and metastasis in the same lymph node is very rare, with only a few cases reported in the literature. Well-differentiated thyroid cancers co-occur especially with head and neck cancers, esophageal cancer, lymphoma, and hematological malignancies.<sup>3-5</sup> Co-occurrence of rectal and papillary thyroid cancer has been reported once in the literature<sup>2</sup> and the metastasis of these two malignant tumors in the same lymph node has not been described to date. Therefore, our patient is the first case of this nature.

A thyroidectomy for a metastatic disease in the presence of a concurrent primary malignant tumor and thyroid cancer was not performed for all cases in the literature. However, no malignant findings were detected after thyroid surgeries in some cases with a papillary thyroid carcinoma metastasis confirmed by a lymph node biopsy.<sup>3</sup> Similarly, we did not perform a thyroidectomy in our patient with metastatic rectal cancer. A thin-needle aspiration biopsy was performed on the hypoactive nodule located in the thyroid, and papillary thyroid cancer was identified after cytological examination.

Some factors are necessary for the development of a secondary malignant tumor. These include: a primary malignancy or the mutagenic effect of chemotherapy and/or radiotherapy performed for another reason, advanced patient age, genetic predisposition, immunosuppression caused by the primary tumor, exposure to environmental factors such as smoking, or secretion of growth hormone from the primary tumor.<sup>2,6</sup>

The incidental occurrence of a well-differentiated thyroid carcinoma and long-term asymptomatic course are among the chal-

lenges that may prevent the diagnosis of a secondary malignancy in a patient with another cancer. Moreover, a secondary malignancy may develop only during the phase when the patient does not respond to the primary tumor treatment. Therefore, a lymphadenopathy detected in a patient with cancer may indicate a metastasis of the secondary malignancy but an association with the primary one.

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