A Case of Metastasis from Gastric Cancer to the Thyroid Gland

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ABSTRACT: Metastatic tumors in the thyroid gland are rarely seen in clinical practice. This report describes a case of metastasis from gastric cancer to the thyroid, found five years after removal of the primary gastric lesion. The patient had a large thyroid mass extending to the mediastinum, but there were no obvious metastatic lesions anywhere except in the thyroid. Subtotal thyroidectomy was performed and histological examination revealed the same findings as those of the original gastric cancer. Of additional interest are the findings that led us to believe this metastatic tumor produced alpha-fetoprotein. Seven months following the operation, the patient died suddenly and, although it is difficult to say whether the patient's survival was prolonged, we believe that the thyroid surgery gave him considerable palliation.

KEY WORDS: gastric cancer, metastasis, thyroid

INTRODUCTION

The thyroid gland is generally considered to be a very infrequent site of metastatic disease1,2 and although some autopsy studies suggest that it may not be as rare as previously believed,3-5 it is still rare for metastasis to manifest as a clinically evident thyroid mass.

In clinical practice, the most common sources of such rare lesions are cancers of the kidney, breast, and lung.6-11 Occasionally, metastatic lesions from gastrointestinal neoplasms such as colon-rectal cancer are seen, but metastasis from gastric cancer is extremely rare. This report describes a case of metastasis from gastric cancer to the thyroid found five years after removal of the primary lesion.

CASE REPORT

A 71 year old man was admitted to our hospital for the evaluation of a large neck mass in February, 1987. The neck mass was first discovered about one month prior to his admission at a routine medical examination. Just before admission he had also experienced slight difficulty in swallowing and felt some pressure sensation in his neck. He had undergone a total gastrectomy five years earlier for gastric cancer at another hospital, but he had no history of thyroid disease. Physical examination revealed a large stony hard nodule in the area of the left thyroid lobe and the isthmus with no cervical lymphadenopathy. Chest X-ray showed tracheal...
deviation to the right and a small pulmonary nodule in the middle part of the right lung that was thought to be a granuloma caused by old tuberculosis. Double contrast studies of the upper gastrointestinal tract showed no sign of recurrent gastric cancer although the upper part of the esophagus had notably shifted up to the left (Fig. 1). A CT scan revealed that the tumor occupied almost the entire thyroid gland and extended to the mediastinum (Fig. 2). Serum free T4 and TSH levels were normal, but serum T3 levels had decreased (63 ng/dl). Serum anti-thyroglobulin and anti-microsomal antibodies were negative. Serum CEA and alpha-fetoprotein (AFP) levels were both elevated, being 62.9 ng/ml and 124.7 ng/ml, respectively, however, serum calcitonin levels were normal. A fine needle aspiration biopsy was thus performed, after which the histological appearance was interpreted as metastatic adenocarcinoma, most likely of gastric cancer. Barium enema and CT scan of the abdomen did not reveal any abnormalities and a Ga67-citrate scan showed accumulation only within the thyroid nodule. There were no obvious metastatic lesions anywhere except in the thyroid gland.

On June 24, 1987, a subtotal thyroidectomy was performed. In addition to the usual collar incision, a longitudinal sternotomy was necessary in order to separate the thyroid mass from the mediastinal great vessels. Although the left recurrent laryngeal nerve was involved in the thyroid tumor and required resection, the tumor was relatively easy to dissociate from the surrounding structures. The upper part of the right thyroid lobe appeared normal and was therefore retained. There was a large lymph