MIXED MEDULLARY AND PAPILLARY THYROID CARCINOMA – A CASE REPORT

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Introduction

Thyroid cancers are divided into two main subgroups according to their embryonic origin: papillary cancer, the most common histologic type, seen in 75-80%, and medullary cancer, seen in 5-10% (sporadic or as a component of Multiple Endocrine Syndrome). Because of the different phenotypic characteristics of these two cancers, it's unusual for them to present simultaneously. Since 1980, only a few cases of simultaneous papillary and medullary thyroid cancer have been reported. Medullary thyroid cancer may have follicular or papillary components, but it's very rare to see mixed medullary and papillary thyroid cancer in a single nodule (<2 cm). In this article, we review the characteristics of one of our patients with mixed medullary and papillary thyroid cancer.

Case

A 59-year-old woman with a history of autoimmune hepatitis and primary biliary cirrhosis, was evaluated for a 16x12 millimeter thyroid nodule in her right lobe. Finding medullary carcinoma by fine needle biopsy, she underwent total thyroidectomy with central lymph node dissection. Histopathologic examination of the tissues revealed "thyroid medullary carcinoma fields meshed with papillary carcinoma sections" (Figure 1-2). Both medullary and papillary carcinoma components were confirmed immunohistochemically. The main component of the mixed tumor was medullary carcinoma. The patient will be followed up in our Endocrinology and Metabolism Clinic.

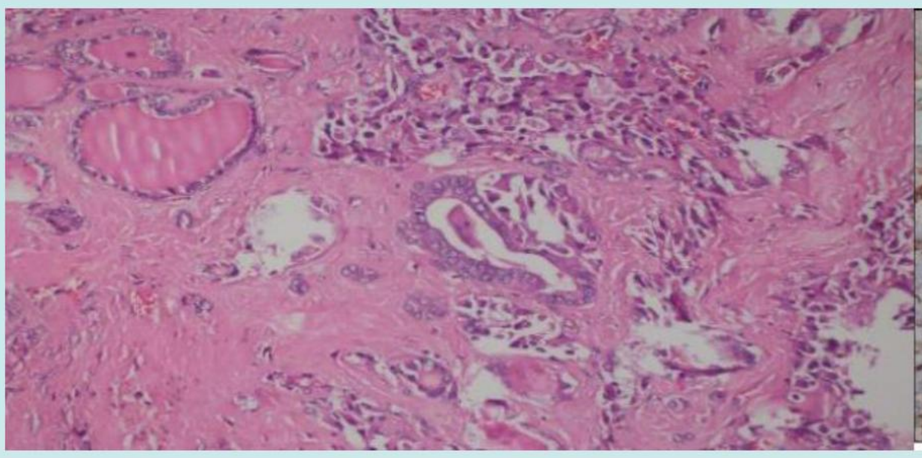

Figure 1: The follicular pattern of papillary carcinoma areas neighboring to medullary carcinoma fields (H&E, x100)

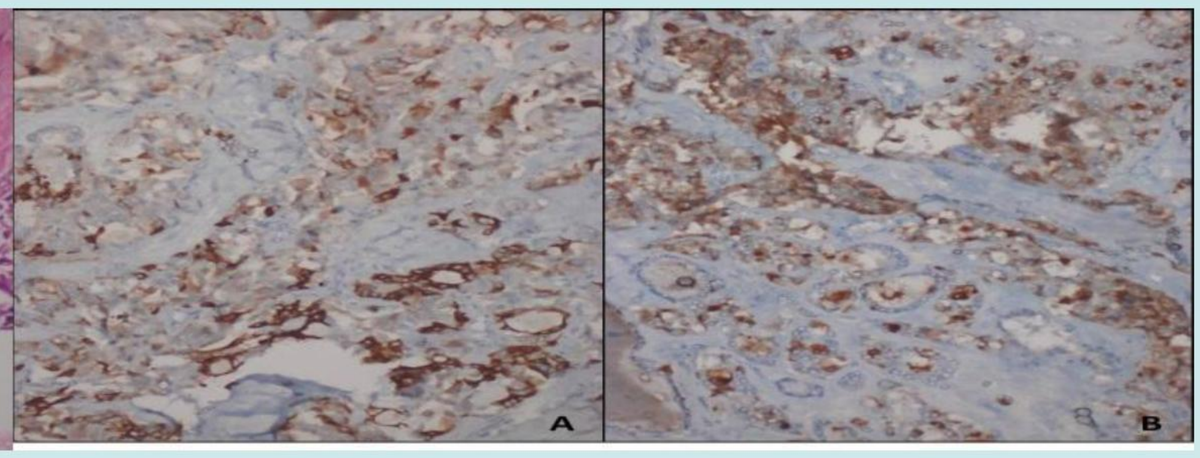

Figure 2: Intensive CK-19 positivity in papillary carcinoma focus (A) and intensive calcitonin positivity in medullary carcinoma fields (B) (x100

Conclusion

The incidence, histopathologic structures, treatment, and follow up of papillary and medullary thyroid carcinomas are different. The presence of medullary thyroid carcinoma mandates further investigation to see whether other components of MEN syndromes are present, and to evaluate other family members for similar problems. The prognosis of papillary carcinoma is better than medullary thyroid cancer. The recurrence and mortality rates of medullary cancer are higher, in direct proportion to the size of the primary lesion. Mixed thyroid carcinomas are rare and are difficult to diagnose preoperatively by fine needle biopsy alone.

References

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