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Synchronous Medullary and Papillary Carcinoma Thyroid

CLINICAL PRESENTATION:

A 53 year-old lady presented with sudden increase in the size of the mass in the neck. On ultrasound two masses were found in thyroid 2.0 cm away. On PET scan patient had FDG avid lesions in thyroid, cervical region, lymph nodes and lungs. Patient underwent total thyroidectomy. We received paraffin blocks for histopathologic and immunohistochemical review..

HISTOPATHOLOGY, IMMUNOHISTOCHEMISTRY AND SPECIAL STAINS:

First tumor revealed tumor arranged in solid sheets, nests of round, oval to plasmacytoid cells with diffusely stippled nuclear staining. Cytoplasm was amphophilic. Stromal amyloid deposits were seen. Immunohistochemistry was positive for Calcitonin, CK, TTF-1, Synaptophysin, CEA, INSM1, Chromogranin and negative for thyroglobulin and PAX8. Congo red stain showed apple green birefringence on polarizing microscopy.

Second tumor revealed complex papillae with fibrovascular cores lined by cells with nuclear clearing, nuclear grooves, intranuclear cytoplasmic pseudoinclusions and overlapping nuclei. Remaining thyroid showed lymphocytic thyroiditis. Thyroglobulin, TTF1, PAX8, CK19, P63 were positive but negative for Calcitonin, Synaptophysin, CEA.

Both components were negative for BRAF IHC.