

Follicular variant of papillary thyroid carcinoma: distinct biologic behavior according to US features

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PURPOSE: Follicular variants of papillary thyroid carcinoma (FVPTC) have a dichotomous ultrasonographic (US) feature. We investigated whether there is a difference in their biologic behavior according to US features.

MATERIALS AND METHODS: We reviewed US findings, pathologic reports and medical charts of 75 consecutive patients with FVPTC who underwent surgery at our institution from March 2006 to March 2008. FVPTCs were divided into PTC-looking and follicular neoplasm (FN)-looking based on US findings. PTC-looking nodules were defined as having at least one of accepted malignant features, whereas FN-looking nodules had no malignant features. Two groups were compared in terms of age, sex, tumor size, multiplicity, extrathyroidal extension, lymph node metastasis, stage, recurrence, and distant metastasis.

RESULTS: Of the 75 FVPTCs, 42 (56%) were PTC-looking and 33 (44%) were FN-looking. The mean tumor size of PTC-looking FVPTC was 1.3 cm, that was significantly smaller than 1.6 cm of FN-looking ($p = 0.0483$). PTC-looking FVPTC showed a higher multiplicity of 48% compared to 15% in FN-looking ($p = 0.0031$). Extrathyroidal extension occurred in 55% of PTC-looking FVPTCs than in 12% of FN-looking ($p = 0.0001$). Lymph node metastasis was more frequent in PTC-looking FVPTC (36%) than FN-looking (12%) ($p = 0.0197$). PTC-looking FVPTC had a higher stage than FN-looking ($p = 0.0001$). Recurrence and distant metastasis were identified only in each one of PTC-looking FVPTCs. There were differences in age and sex between the two groups.

CONCLUSION: FVPTC without malignant features that is a limit to US diagnosis is not rare. However, FVPTC with malignant features seems to behave in a more aggressive fashion than FVPTC without malignant features.

CLINICAL RELEVANCE: Follicular variants of papillary thyroid carcinoma (FVPTC) have a dichotomous ultrasonographic (US) feature. Difference of their biologic behavior remained unclear.