Clinical behavior of follicular variant of papillary thyroid carcinoma: presentation and survival
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ABSTRACT

To determine the prevalence and extent of disease near-total/subtotal thyroidectomy or (4) total thyroidectomy. The prevalence of nodal disease was significantly higher in C-PTC patients when compared to patients with FV-PTC (p<0.001). Ten-year and 15-year overall actuarial survival for C-PTC were 89% and 79%, respectively (Table 3).

INTRODUCTION

• Papillary thyroid carcinoma (PTC) is the most common type of thyroid malignancy, accounting for ~80% of thyroid cancers.1,2

• Follicular variant of PTC (FV-PTC) comprises as many as 41% of all PTC cases.3

• The clinical significance of an FV-PTC diagnosis remains a matter of debate due to the generally favorable prognosis PTC and the limited number of subjects studied in case series.

• The ability of published studies of FV-PTC to draw clinically applicable conclusions was likely limited by small sample sizes and short mean durations of follow-up, which in some cases were confined to just over three years.4,5

• We turned to the National Cancer Institute’s Surveillance, Epidemiology, and End Results (SEER) database to evaluate the behavior of FV-PTC and its influence on patient prognosis.

METHODS

• Cases of PTC arising in 1988-2006 were extracted from the SEER database. Case data included age at diagnosis, sex, histological type of PTC (FV-PTC versus C-PTC), extent of disease at the primary site and nodal metastasis, extent of thyroidectomy, use of radioactive iodine, vital status, cause of death and duration of follow-up were extracted and exported to SPSS version 17.0.

• Categorizes of surgery included (1) biopsy, (2) thyroid lobectomy, (3) near-total/subtotal thyroidectomy or (4) total thyroidectomy.

• Overall actuarial survival rates at 10 and 15 years were determined for the cohort. Overall survival differences between FV-PTC and C-PTC were determined using the Kaplan-Meier method.

• Cox multivariate regression analysis for overall survival outcomes was conducted with the predictor variables: histopathological type, extent of thyroidectomy, use of RAI therapy, age and sex. Statistical significance was set at p<0.05 for all significance testing.

RESULTS

• 31,943 (68.4%) cases of C-PTC and 14,756 (31.6%) cases of FV-PTC were identified, (68.4% C-PTC and 31.6% FV-PTC). Age at presentation and sex distribution were similar between FV-PTC (47.9 years; 79.3% female) and C-PTC patients (46.2 years; 77.3% female). Although nodal disease prevalence was significantly lower in FV-PTC compared to C-PTC (14.8% versus 27.8%, respectively, p<0.001), T-stage was not significantly different (p=0.450). Mean overall survivals for patients with FV-PTC (204.5 months) and C-PTC (205.3 months) were not significantly different (p=0.373). Cox regression analysis revealed that advanced age (p<0.001), male gender (p<0.001), advanced tumor status (p<0.001) and presence of nodal disease (p<0.001) were associated with reduced overall survival, while histopathological subtype was not (p=0.360).

• With respect to staging at presentation, no trend towards earlier or later stage disease for either PTC subtypes was found.

• Twice as many patients with C-PTC presented with nodal disease (27.8%) compared to FV-PTC patients (14.8%) (p<0.001), indicating that FV-PTC has a significantly lower tendency towards nodal disease compared to C-PTC.

• Mean overall survival times (±95%CI) for all patients with C-PTC (205.3 ± 1.0 months) and FV-PTC (204.5 ± 1.8 months) were not significantly different (p=0.373). Ten-year and 15-year overall survival for C-PTC were 89% and 81%, respectively, while corresponding survival for FV-PTC were 89% and 79%, respectively (Figure 1).

• The diagnosis of FV-PTC has little to no impact on patient survival when compared to patients with C-PTC. Clinicians should be able to definitively provide FV-PTC patients with appropriate counseling on prognosis and to confidently follow C-PTC treatment algorithms for FV-PTC therapy.

CONCLUSIONS

• FV-PTC constitutes a frequently diagnosed subset of PTC, comprising roughly 32% of all PTC cases.

• Although debate has surrounded the differences in the clinical courses and outcomes of patients with FV-PTC, our data suggest that the prognoses of patients with FV-PTC is basically similar to that of C-PTC, and patients should be treated and counseled accordingly.

REFERENCES