Papillary Renal Cell Carcinoma Type 1 and 2: Clinicopathological Characteristics and Prognosis

Introduction and Objective: The aim of the study was to clarify the clinicopathological characteristics and prognosis of papillary renal cell carcinoma (PRCC) type 1 and 2.
Materials and Methods: We performed nephrectomy or partial nephrectomy in 501 patients with renal cell carcinoma in our institution from 1984 to 2009. The pathological specimens were reviewed and the histology was re-evaluated according to the 2004 WHO histological classification. The clinicopathological and prognostic differences between type1 and 2 PRCC were studied.
Results: Of 501 cases, 43 were diagnosed as PRCC pathologically. Twenty-two and 21 cases were assigned to type 1 and 2, respectively. The difference in sex, age, performance status, and the number of tumors between type1 and 2 were not significant, but type 2 cases had significantly larger size, more advanced stage, higher incidence of symptomatic, higher CRP, higher grade compared to the type 1. The 5-year metastasis-free survival rates for type 1 and 2 were 94.4% and 28.4%, and the 5-year cancer-specific survival rates were 90.0% and 51.6%, respectively. Of 14 cases of PRCC type 2 with metastases, lymph node metastases were documented in 10 (71.4%), which was significantly higher than those of clear RCC (13.3%, $p<0.0001$).
Conclusions: Type 2 PRCC had aggressive nature while type 1 had indolent. Type 2 PRCC tends to metastasize to lymph nodes. Treatment strategies for metastatic PRCC should be targeted against type 2 subtype.