

Long-Term Outcome of Surgical Resection for Local Recurrence Following Radical Nephrectomy

Introduction and Objective: Isolated local recurrence of renal cell carcinoma (RCC) is a rare occurrence. Maximal resection of the recurring lesion is considered to be a feasible treatment. To characterize the long-term outcome of surgical extirpation for local recurrence after radical nephrectomy of RCC and identify prognostic factors for locally recurrent RCC.

Materials and Methods: Peking University First Hospital Urologic database was queried for all patients with isolated local recurrence following radical nephrectomy for localized RCC. According to previous literature, local recurrence included relapse in the renal fossa, ipsilateral adrenal gland and ipsilateral retroperitoneal lymph nodes. Univariate and multivariate analyses of prognostic factors, including Fuhrman nuclear grade, tumor stage, primary tumor size, recurrence time and recurrence tumor size, on cancer specific survival rate were performed. Median follow-up was 62 months. All the data were analysed by SPSS19.0. Cancer-specific survival and relapse patterns were estimated using the Kaplan–Meier method.

Results: In our institutional database, 1045 patients were treated with nephrectomy for localized RCC from 1994 to 2011. With a median postoperative follow-up of 62 months (range 12–119), 15 patients (1.44%) experienced local recurrence, 9 of which were managed by surgical resection, the remaining 6 did not receive an operation. Patients received surgical resection had a 1-year cancer specific survival rate of 87%, compared to 60% of the patients without receiving surgical treatment. Four-year cancer specific survival rate is 72% versus 30%. The median survival time is 60 months versus 37 months. The recurrence interval is 22.4 months versus 37.1 months. The correlation analysis indicated that recurrence interval has positive correlation with Fuhrman nuclear grade of primary renal tumor ($P < 0.05$) and primary tumor stage ($p < 0.05$). There was significantly positive correlation among death and recurrent tumor size ($p < 0.05$).

Conclusions: Surgical resection for local recurrence of RCC in selected patients is a feasible management and may prolong the survival time. Fuhrman nuclear grade and tumor stage of primary renal tumor may have prognostic potential for tumor relapse.