

Radical Prostatectomy for High-Risk Prostate Cancer Defined by Preoperative Criteria: Is the Current Definition Adequate?

Introduction and Objective: To assess pathological findings and oncological outcomes after radical prostatectomy in men with high-risk prostate cancer (PCa).

Materials and Methods: We performed retrospective analysis of 151 patients who underwent radical retropubic prostatectomy for high-risk PCa between 1995 and 2009. High-risk PCa was defined according to D'Amico classification: stage \geq T2c or Gleason score (GS) \geq 8 or PSA \geq 20ng/ml. Time to biochemical progression, specific and overall survival curves were constructed by the Kaplan-Meier method and long-rank tests were used for comparison of the survival curves.

Results: Mean age of patients was 62.1 (range 48 – 76), median 63 years. The mean follow up was 53 months (range 9 – 163), median 40. The mean pre-operative PSA was 16.3 ng/ml (range 2.5 – 100), median 13.5 ng/ml. Clinical stage cT1c was present in 11 (7.3%) patients, cT2 in 21 (13.9%) and cT3 in 119 (78.8%) patients. Pathological stage pT2a was found in 3 (2.0%) patients, pT2b in 3 (2.0%), pT2c in 38 (25.2%), pT3a in 34 (22.5%) and pT3b in 71 (47%) patients. Biopsy GS \leq 6 was found in 66 (43.7%) patients, GS 7 in 41 (27.2%), GS 8 in 31 (20.5%) and GS 9 in 13 (8.6%) patients. Final histopathology showed GS \leq 6 in 27 (17.9%) patients, GS 7 in 80 (52.9%), GS 8 in 18 (11.9%) and GS 9 in 26 (17.2%) patients. Positive surgical margins were found in 64 (42.4%) patients. Eleven (7.3%) patients had positive lymph nodes. The 3, 5, 10-year biochemical progression-free survival rate was 85.92%, 65.78% and 27.27%, respectively. Cancer-specific survival was 97.59%, 94.09% and 67.89%, respectively. Overall survival was 94.9%, 91.5% and 66.02%, respectively. The strongest predictor of biochemical progression was pathological stage, positive surgical margin and GS. There were 36 patients (23.8%) with favourable pathology defined by stage \leq pT2c, pN0, GS \leq 7 and negative surgical margin in our series.

Conclusions: Radical prostatectomy for high-risk prostate cancer may provide acceptable long-term oncological control for selective subgroup of patients. Further prognostic stratification of high-risk prostate cancer is warranted to provide patients with tailored treatment option.