Oncological Outcome of Radical Prostatectomy as Monotherapy for Japanese Men with High Risk Prostate Cancer

Introduction and Objective: The objectives of this study were to retrospectively review our experience with radical prostatectomy (RP) as monotherapy for Japanese patients with high-risk prostate cancer and to identify factors associated with biochemical outcome in these patients.
Materials and Methods: This study included a total of 382 consecutive patients who were diagnosed as having high risk prostate cancer according to D'Amico definition (PSA 20 ng/ml or greater, cT2c or greater, or biopsy Gleason score 8 – 10), and subsequently underwent RP and pelvic lymphadenectomy without neoadjuvant therapy between 2001 and 2008. In this series, biochemical recurrence (BR) was defined as a serum PSA 0.2 ng/mL or greater on two consecutive measurements, and none of the patients received any adjuvant therapies until their serum PSA levels reached 0.4 ng/mL or greater.
Results: The median age and preoperative serum PSA in these 382 patients were 68 years (range, 54 – 79 years) and 15.9 ng/ml (range, 2.9 – 65.4 ng/ml), respectively. Pathological examinations demonstrated that pathological stage was pT2, pT3 and pT4 in 195, 151 and 36, respectively. Gleason score was 6, 7 and 8 – 10 in 40, 148 and 194, respectively, nodal status was pN0 and pN1 in 361 and 21, respectively, and surgical margin status was negative and positive in 201 and 181, respectively. During the observation period (median, 48.0 months), BR occurred in 134 of the 382 patients; however, there was no patient who died of cancer progression. The 1-, 3- and 5-year BR-free survival (BRFS) rates were 79.2%, 68.4% and 60.1%, respectively. Among several factors examined, capsular invasion, seminal vesicle invasion and surgical margin status appeared to be independently associated with BRFS on multivariate analysis. Furthermore, there were significant differences in BRFS according to positive numbers of these three independent risk factors; that is, BR occurred in 21 of 140 patients who were negative for all risk factors (15.0%), 69 of 168 positive for a single risk factor (41.1%), and 45 of 74 positive for 2 or 3 risk factors (60.8%).
Conclusions: These findings suggest that comparatively favorable cancer control could be achieved by RP as monotherapy for Japanese men with high risk prostate cancer; however, RP alone may not be insufficient in patients with positive for capsular invasion, seminal vesicle invasion and/or surgical margin.