Abstract

OBJECTIVE: To assess the characteristics of biochemical recurrence in the late period (>5 years after radical prostatectomy) and the differences in the predictors of biochemical recurrence in different periods, we conducted a multicenter retrospective study.

METHODS: We reviewed 478 men who underwent radical prostatectomy for clinically localized prostate cancer. All of the patients were followed up for at least 5 years. The cohort was then divided into three groups; no recurrence group, recurrence <5 years after surgery group and recurrence ≥5 years after surgery group. The background characteristics of each group were compared using the χ² test. A Cox multivariate regression analysis was performed to determine the predictors of biochemical recurrence in each period.

RESULTS: Biochemical recurrence occurred in 135 men. In 113 (84%) of the patients, biochemical recurrence occurred at <5 years after surgery; in 22 (16%), it occurred at ≥5 years after surgery. The proportion of men with a low preoperative prostate-specific antigen level was significantly larger in the latter group (P = 0.0023). A preoperative prostate-specific antigen level and a positive surgical margin were significant predictors of biochemical recurrence at <5 years after surgery (hazard ratio: 1.03 and 3.20). A positive surgical margin was also a significant predictor of biochemical recurrence at ≥5 years after surgery (hazard ratio: 3.03); however, a high preoperative prostate-specific antigen level was not.

CONCLUSIONS: Biochemical recurrence occurred at ≥5 years after surgery in 16% of the patients. A positive surgical margin predicted biochemical recurrence in both the early and late periods.

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KEYWORDS: biochemical recurrence; positive surgical margin; predictive factor; prostate cancer; radical prostatectomy

PMID: 27940489 DOI: 10.1093/jjco/hyw181

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