Does the time from biopsy to surgery affect biochemical recurrence after radical prostatectomy?

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Abstract

OBJECTIVE: To evaluate whether the time from biopsy to radical prostatectomy (RP) predicts the biochemical recurrence (BCR) after RP, as men diagnosed with clinically localized prostate cancer have several available treatment options and investigating these alternatives may delay the initiation of definitive therapy.

PATIENTS AND METHODS: We identified 3969 consecutive patients who had RP for clinically localized prostate cancer from 1987 to 2002; those eligible for the study had RP within a year of diagnosis. The interval between biopsy and RP was analysed both as a continuous and as a dichotomous variable (divided at 3 months). Multivariate analysis was used to evaluate the impact of time to RP on BCR. Subsets were also analysed for the effect of time to RP in patients considered to be at high risk of recurrence, with group 1 having a prostate specific antigen (PSA) level of > or = 20 ng/mL, a biopsy Gleason score of > or = 8, or clinical stage > or = T2c; and group 2 assessed as having a >40% probability of BCR using a preoperative nomogram.

RESULTS: In all, 3149 patients met the inclusion criteria and had a mean (interquartile range) follow-up after RP of 5.4 (2.2-7.9) years. Multivariate analysis showed that the year of biopsy, PSA level before biopsy, clinical stage and biopsy Gleason score (all P < 0.001) were significantly associated with BCR after RP. The time to RP, treated either as a continuous variable (P = 0.252) or when categorized at 3 months (P = 0.939), failed to predict BCR. Further, the time to RP was not an independent predictor of BCR for patients at high risk of recurrence in group 1 (P = 0.147) or group 2 (P = 0.548).

CONCLUSIONS: The time from biopsy to RP did not influence the probability of BCR for men who had RP within a year of diagnosis, even for those considered to be at high risk of BCR. Instead, the clinical and pathological features of the cancer provided the best estimate of the risk of BCR.

PMID: 16153197 [PubMed - indexed for MEDLINE]
Does the time from biopsy to surgery affect biochemical... [BJU Int. 2005]... http://www.ncbi.nlm.nih.gov/pubmed/16153197