Impact of positive surgical margins on prostate-specific antigen failure after radical prostatectomy in adjuvant treatment-naïve patients.


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Abstract

STUDY TYPE: Therapy (case series).

LEVEL OF EVIDENCE: 4. What's known on the subject? and What does the study add? Despite excellent surgical cancer control, up to 40% of patients will have biochemical recurrence following radical prostatectomy (RP) for localized prostate cancer. Positive surgical margins (PSM) have been clearly demonstrated to be one of the main predictive factors for biochemical failure, disease progression and cancer mortality. However, decision of further management (adjuvant or salvage therapy) in patients with PSM remains controversial, and many debatable questions arise concerning the incidence of clinical progression and the impact of systematic adjuvant treatment on the cancer specific and overall survival. Analysis of the pathological and disease recurrence outcomes of our large cohort of patients treated by RP provides evidence that PSMs are associated with a poor prognosis in terms of PSA failure and need for salvage therapy. However, such a distinction between negative or positive margin cancers seems to appear clinically less relevant in locally advanced disease with seminal vesicle or high Gleason score ≥8 due to the predominant significance of these two poor prognosis factors for prediction of PSA failure.

OBJECTIVE: To study the impact of positive surgical margins (PSMs) as an independent predictor of prostate-specific antigen (PSA) failure after radical prostatectomy in adjuvant treatment-naïve patients.

PATIENTS AND METHODS: From 2000 to 2008, 1943 men who underwent a radical prostatectomy at Henri Mondor Hospital and who did not receive neoadjuvant or adjuvant therapy were included. Follow-up was recorded into a prospective database. Mean follow-up was 68.8 months. The biochemical recurrence-free survival (RFS), defined by a PSA>0.2 ng/mL, and the need for salvage therapy in univariate and multivariate models, were evaluated.

RESULTS: PSA failure was reported in 14.7% and PSMs were noted in 25.6%. In the overall cohort, PSM was significantly predictive for PSA failure (P<0.001; hazard ratio, HR, 2.6), need for salvage therapy (P<0.001; HR, 2.9) and specific deaths (P=0.006; HR, 3.7). The 5-year RFS was 84.4% in men with negative margins compared to 57.5% in the case of PSM. After stratification by pathological stage and Gleason score, margin status was significantly predictive for PSA failure in pT2 (P<0.001), pT3a (P=0.001) and/or Gleason score≤7 cancers (P<0.001), whereas the impact of PSM did not reach significance in pT3b (P=0.196), pT4 (P=0.061) and/or Gleason score≥8 cancers (P=0.115).
CONCLUSIONS: PSMs are associated with a poor prognosis in terms of RFS and the need for salvage therapy. Such a distinction between negative or positive margin cancers appears to be clinically less relevant in locally advanced disease with seminal vesicle or high Gleason score (≥8).

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