Predicting prostate cancer-specific outcome after radical prostatectomy among men with very high-risk cT3b/4 PCa: a multi-institutional outcome study of 266 patients.


Abstract

Background: The value of radical prostatectomy (RP) as an approach for very high-risk prostate cancer (PCa) patients is controversial. To examine the risk of 10-year cancer-specific mortality (CSM) and other-cause mortality (OCM) according to clinical and pathological characteristics of very high-risk cT3b/4 PCa patients treated with RP as the primary treatment option.

Methods: In a multi-institutional cohort, 266 patients with very high-risk cT3b/4 PCa treated with RP were identified. All patients underwent RP and pelvic lymph-node dissection. Competing-risk analyses assessed 10-year CSM and OCM before and after stratification for age and Charlson comorbidity index (CCI).

Results: Overall, 34 (13%) patients died from PCa and 73 (28%) from OCM. Ten-year CSM and OCM rates ranged from 5.6% to 12.9% and from 10% to 38%, respectively. OCM was the leading cause of death in all subgroups. Age and comorbidities were the main determinants of OCM. In healthy men, CSM rate did not differ among age groups (10-year CSM rate for \( \leq 64 \), 65-69 and \( \geq 70 \) years: 16.2%, 11.5% and 17.1%, respectively). Men with a CCI \( \geq 1 \) showed a very low risk of CSM irrespective of age (10-year CSM: 5.6-6.1%), whereas the 10-year OCM rates increased with age up to 38% in men \( \geq 70 \) years.

Conclusion: Very high-risk cT3b/4 PCa represents a heterogeneous group. We revealed overall low CSM rates despite the highly unfavorable clinical disease. For healthy men, CSM was independent of age, supporting RP even for older men. Conversely, less healthy patients had the highest risk of dying from OCM while sharing very low risk of CSM, indicating that this group might not benefit from an aggressive surgical treatment.

Outcome after RP as the primary treatment option in cT3b/4 PCa patients is related to age and comorbidity status. Prostate Cancer and Prostatic Disease advance online publication, 23 December 2014; doi:10.1038/pcan.2014.41.

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