Favourable long-term outcomes with brachytherapy-based regimens in men ≤60 years with clinically localized prostate cancer.

Department of Radiation Oncology, Memorial Sloan-Kettering Cancer Center, New York, NY, USA.

Abstract

WHAT'S KNOWN ON THE SUBJECT? AND WHAT DOES THE STUDY ADD?: Brachytherapy (BT)-based treatment for clinically localized prostate cancer is a well-accepted treatment strategy; however, there is concern that long-term outcomes and morbidity may not be acceptable in young patients (≤60 years). We report our long-term experience with BT in men aged ≤ 60 years with a minimum of 2 years of post-treatment follow-up. Our results show low treatment-related morbidity and excellent long-term outcomes with BT-based treatment and suggest that such treatment should be offered to this patient population.

OBJECTIVE: To report long-term outcomes of men ≤60 years treated with brachytherapy (BT) for low- and intermediate-risk prostate cancer.

PATIENTS AND METHODS: Of 1655 patients treated with BT for clinically localized prostate cancer between January 1998 and May 2008 at Memorial Sloan-Kettering Cancer Center, 236 patients with National Comprehensive Cancer Network low- (n = 178) or intermediate-risk (n = 58) prostate cancer were ≤60 years old with a 3-year minimum follow-up, and represent the subjects of this report. Brachytherapy was given either as monotherapy (n = 169) or with external beam radiation therapy (EBRT; n = 67). Forty-four patients (19%) received neoadjuvant cytoreductive hormone therapy. The 'nadir+2' definition was used for prostate-specific antigen (PSA) recurrence. Common Terminology Criteria for Acute Events (CTCAE) v 3.0 was used to grade genitourinary (GU) and gastrointestinal (GI) toxicity. Potency was defined as the ability to obtain an erection suitable for intercourse or an International Index of Erectile Function score ≥ 22. The Kaplan-Meier method and Cox regression were used for statistical analysis. The median follow-up was 83 months.

RESULTS: The 8-year PSA relapse-free survival (RFS), cancer-specific and overall survival rates for the entire cohort were 96, 99 and 96%, respectively. For patients with low-risk disease, the 8-year PSA RFS rate was 97% and for intermediate-risk patients it was 94% (P = 0.34). There was no difference in PSA RFS between BT alone and combined therapy (P = 0.17). Late grade ≥ 2 GU and GI toxicity was 14 and 3%, respectively. Of 150 patients potent before treatment, 76 (51%) were potent at last follow-up, with 50/76 (66%) using no medication. There was no significant difference in post-treatment potency between BT alone and BT with EBRT (P = 0.74).

CONCLUSIONS: Brachytherapy provides patients aged ≤ 60 years with low- and intermediate-risk prostate cancer with excellent outcomes and has a low risk of significant long-term GU or GI morbidity. Erectile function is preserved in >50% of patients and the majority do not require erectile dysfunction medication.

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