Abstract

PURPOSE: To evaluate the efficacy of postoperative adjuvant radiotherapy (RT) for positive resection margin and/or pathologic T3 (pT3) adenocarcinoma of the prostate with undetectable postoperative serum PSA levels.

METHODS AND MATERIALS: We retrospectively analyzed 125 patients with a positive resection margin and/or pT3 adenocarcinoma of the prostate who had undetectable postoperative serum PSA levels after radical prostatectomy. Seventy-three patients received postoperative adjuvant RT and 52 did not. Follow-up ranged from 1.5 to 12.0 years (median 4.2 for the irradiated group and 4.9 for the nonirradiated group). PSA outcome was available for all patients. Freedom from failure was defined as the maintenance of a serum PSA level of < or =0.2 ng/mL, as well as the absence of clinical local recurrence and distant metastasis.

RESULTS: No difference was found in the 5-year actuarial overall survival between the irradiated and nonirradiated group (94% vs. 95%). However, patients receiving adjuvant RT had a statistically superior 5-year actuarial relapse-free rate, including freedom from PSA failure, compared with those treated with surgery alone (88% vs. 65%, p = 0.0013). In the irradiated group, 8 patients had relapse with PSA failure alone. None had local or distant recurrence. In the nonirradiated group, 15, 1, and 2 had PSA failure, local recurrence, and distant metastasis, respectively. On Cox regression analysis, pre-radical prostatectomy PSA level and adjuvant RT were statistically significant predictive factors for relapse, and Gleason score, extracapsular invasion, and resection margin status were not. There was a suggestion that seminal vesicle invasion was associated with an increased risk of relapse. The morbidity of postoperative adjuvant RT was acceptable, with only 2 patients developing Radiation Therapy Oncology Group Grade 3 genitourinary complications. Adjuvant RT had a minimal adverse effect on urinary continence and did not cause serious gastrointestinal toxicity.

CONCLUSION: Postoperative adjuvant RT was associated with a lower risk of relapse, including freedom from PSA failure, compared with observation alone for pT3 and/or margin-positive disease with undetectable postoperative PSA levels. This was accomplished with a minimal risk of serious RT morbidity.

Comment in

Positive resection margin and/or... [Int J Radiat Oncol Biol Phys. 2002]...