Mortality and Androgen-Deprivation Therapy as Salvage Treatment for Biochemical Recurrence after Primary Therapy for Clinically Localized Prostate Cancer.

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Abstract

PURPOSE: Androgen-deprivation therapy is often used as salvage treatment (SADT) for men with rising prostate-specific antigen (PSA) after initial radical prostatectomy or radiotherapy for clinically localized prostate cancer. Given the lack of evidence from general practice, we examined the association of SADT with mortality in an observational cohort study.

MATERIALS AND METHODS: Among three managed care organizations, we assembled a retrospective cohort of all men with newly diagnosed localized prostate cancer (1995-2009) who had a PSA rise (biochemical recurrence) after primary radical prostatectomy or radiotherapy (n=5,804). Main outcomes were all-cause and prostate-cancer specific mortality. We used Cox proportional hazards models to estimate mortality, with SADT as a time-dependent predictor.

RESULTS: Overall, SADT was associated with neither all-cause nor prostate-cancer specific mortality within the prostatectomy cohort (hazard ratio [HR]=0.97, 95% CI: 0.70-1.35 or HR=1.18, 95% CI: 0.68-2.07) or the radiotherapy cohort (HR=0.84, 95% CI: 0.70-1.01 or HR=1.06, 95% CI: 0.80-1.40). Among men with PSA doubling time <9 months after their PSA rise, SADT was statistically significantly associated with decreased risk of all-cause and prostate-cancer specific mortality within the prostatectomy cohort (HR=0.35, 95% CI: 0.20-0.63 and HR=0.43, 95% CI: 0.21-0.91) and the radiotherapy cohort (HR=0.62, 95% CI: 0.48-0.80 and HR=0.65, 95% CI: 0.47-0.90).

CONCLUSIONS: We found no association of SADT with all-cause or cause-specific mortality in most men with biochemical recurrence after primary radical prostatectomy or radiotherapy for clinically localized prostate cancer. Men with quickly progressed disease may derive a clinical benefit from SADT.

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KEYWORDS: androgen deprivation therapy; localized prostate cancer; mortality; salvage treatment

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