Prostate

Nonrandomised Comparison of Efficacy and Side Effects of Bicalutamide Compared With Luteinizing Hormone-Releasing Hormone (LHRH) Analogs in Combination With Radiation Therapy in the CHHiP Trial

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PURPOSE

CHHiP is a randomised trial evaluating moderately hypofractionated radiation therapy for treatment of localised prostate cancer. Of all participants, 97% of them had concurrent short-course hormone therapy (HT), either luteinising hormone-releasing hormone analog (LHRHa) or 150 mg of bicalutamide daily. This exploratory analysis compares efficacy and side effects in a nonrandomised comparison.

METHODS AND MATERIALS

In our study, 2700 patients received LHRHa and 403 received bicalutamide. The primary endpoint was biochemical/clinical failure. Groups were compared with Cox regression adjusted for various prognostic factors and stratified by radiation therapy dose. A key secondary endpoint was erectile dysfunction (ED) assessed by clinicians (using scores from Late Effects on Normal Tissues: Subjective/Objective/Management [LENT-SOM] subjective erectile function for vaginal penetration) and patients (single items within the University of California-Los Angeles Prostate Cancer Index [UCLA PCI] and Expanded Prostate Cancer Index Composite [EPIC]-50 questionnaires) at two years and compared between HT regimens by $\chi 2$ trend test.

RESULTS

Bicalutamide patients were significantly younger (median 67 vs 69 years LHRHa). Median follow-up was 9.3 years. There was no difference in biochemical or clinical failure with an adjusted hazard ratio or 0.97 (95% confidence interval, 0.77-1.23; P =0.8). At two years, grade ≥2 LENT-SOM ED was reported in significantly more LHRHa patients (313 out of 590; 53%) versus bicalutamide (17 out of 68; 25%) (P < .0001). There were no differences in ED seen with UCLA-PCI and EPIC-50 questionnaires.

CONCLUSIONS

In this nonrandomised comparison, there was no evidence of a difference in efficacy according to type of HT received. Bicalutamide preserved clinician assessed (LENT-SOM) erectile function at two years but patient-reported outcomes were similar between groups.