Toxicity after post-prostatectomy image-guided intensity-modulated radiotherapy using Australian guidelines.

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Abstract

INTRODUCTION: We evaluated single institution toxicity outcomes after post-prostatectomy radiotherapy (PPRT) via image-guided intensity-modulated radiation therapy (IG-IMRT) with implanted fiducial markers following national eviQ guidelines, for which late toxicity outcomes have not been published.

METHODS: Prospectively collected toxicity data were retrospectively reviewed for 293 men who underwent 64-66 Gy IG-IMRT to the prostate bed between 2007 and 2015.

RESULTS: Median follow-up after PPRT was 39 months. Baseline grade ≥2 genitourinary (GU), gastrointestinal (GI) and sexual toxicities were 20.5%, 2.7% and 43.7%, respectively, reflecting ongoing toxicity after radical prostatectomy. Incidence of new (compared to baseline) acute grade ≥2 GU and GI toxicity was 5.8% and 10.6%, respectively. New late grade ≥2 GU, GI and sexual toxicity occurred in 19.1%, 4.7% and 20.2%, respectively. However, many patients also experienced improvements in toxicities. For this reason, prevalence of grade ≥2 GU, GI and sexual toxicities 4 years after PPRT was similar to or lower than baseline (21.7%, 2.6% and 17.4%, respectively). There were no grade ≥4 toxicities.

CONCLUSIONS: Post-prostatectomy IG-IMRT using Australian contouring guidelines appears to have tolerable acute and late toxicity. The 4-year prevalence of grade ≥2 GU and GI toxicity was virtually unchanged compared to baseline, and sexual toxicity improved over baseline. This should reassure radiation oncologists following these guidelines. Late toxicity rates of surgery and PPRT are higher than following definitive IG-IMRT, and this should be taken into account if patients are considering surgery and likely to require PPRT.

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