Hypofractionated IMRT of the prostate bed after radical prostatectomy: acute toxicity in the PRIAMOS-1 trial.


Abstract

Hypofractionated radiation therapy as primary treatment for prostate cancer is currently being investigated in large phase 3 trials. However, there are few data on postoperative hypofractionation. The Radiation therapy for the Prostate Bed With or Without the Pelvic Lymph Nodes (PRIAMOS 1) trial was initiated as a prospective phase 2 trial to assess treatment safety and toxicity of a hypofractionated intensity modulated radiation therapy (IMRT) of the prostate bed.

METHODS AND MATERIALS: From February to September 2012, 40 patients with indications for adjuvant or salvage radiation therapy were enrolled. One patient dropped out before treatment. Patients received 54 Gy in 18 fractions to the prostate bed with IMRT and daily image guidance. Gastrointestinal (GI) and genitourinary (GU) toxicities (according to National Cancer Institute Common Terminology Criteria for Adverse Events, version 4.0) were recorded weekly during treatment and 10 weeks after radiation therapy.

RESULTS: Overall acute toxicity was favorable, with no recorded adverse events grade ≥3. Acute GI toxicity rates were 56.4% (grade 1) and 17.9% (grade 2). Acute GU toxicity was recorded in 35.9% of patients (maximum grade 1). Urinary stress incontinence was not influenced by radiation therapy. The incidence of grade 1 urinary urge incontinence increased from 2.6% before to 23.1% 10 weeks after therapy, but grade 2 urge incontinence remained unchanged.

CONCLUSIONS: Postoperative hypofractionated IMRT of the prostate bed is tolerated well, with no severe acute side effects.