

COLORECTAL COMPLICATIONS OF EXTERNAL BEAM RADIATION VS. BRACHYTHERAPY FOR PROSTATE CANCER

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Background: Although radiation therapy plays a central role in the management of prostate cancer, colorectal complications remain a troubling byproduct. We sought to determine the prevalence and significance of colorectal complications following external beam radiation therapy (EBRT) versus brachytherapy (BT) for prostate cancer.

Methods: We performed a retrospective review of all patients undergoing EBRT or BT for prostate cancer from January 1999 to October 2005. Toxicities were graded using the Radiation Therapy Oncology Group (RTOG) scoring system, or the modified RTOG/European Organization for Research and Treatment of Cancer (EORTC) grading criteria.

Results: 183 patients underwent EBRT and 50 BT with a mean follow-up of 39 months. BT was associated with significantly less acute (6% vs 43.5%) and late toxicities (2% vs 21.8%) (both $p < 0.001$). Among patients receiving EBRT, acute grade 3 toxicity was experienced by 1 (0.5%) patient, and Grade 2 toxicity by 79 (43%). Increased stool frequency was the most common manifestation (62%), followed by rectal pain and urgency (30%) and rectal bleeding (21%). Only one patient (0.5%) experienced an acute Grade 3 toxicity, bleeding requiring surgery. Late toxicity included 34 (18.6%) patients with grade 2 (bleeding (68%), frequent stools (26%), pain and urgency (18%)), and 5 patients (2.7%) with grade 3 toxicity (bleeding requiring multiple cauteries (3), small bowel obstruction requiring surgery (1), anal stenosis requiring repeat dilations (1)). BT was relatively well tolerated, with only three patients (6%) experiencing grade 2 acute toxicity symptoms of pain and urgency. One BT patient suffered late grade 2 toxicity of bleeding requiring intervention. One patient developed rectal cancer 20 years after EBRT.

Conclusions: Despite its relative safety, radiation therapy frequently requires medical therapy for complications, as well as endoscopic or surgical intervention for more severe complications. Overall BT has a significantly lower incidence of acute and late toxicities than EBRT.