

Assessment of Quality of Life (QOL) of Bowel Function in Prostate Cancer Patients Undergoing Different Radiation Treatment Modalities With or Without Hormones

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Premise

All patients were asked to complete the Rectal Function Study Questionnaire-Schiffler Oncology Center pre-treatment and selected post-treatment time intervals. This study was conducted to assess and compare the variations in QOL of prostate cancer patients receiving External Beam Radiation Therapy (EBRT), monotherapy via High Dose Rate (HDR) brachytherapy, or Palladium (Pd) implants, length of follow-up time, and the effect of androgen deprivation therapy (HT).

Methods and Materials

298 consecutive patients with prostate cancer were enrolled in our HIC approved QOL assessment study. Between November 2001 and January 2006, 205 patients received EBRT, 63 HDR and 30 LDR-Pd103. 66 of the 298 patients received androgen deprivation therapy in addition to their radiation course. Hormones were initiated pre-treatment for 59 of the 66 patients. Questionnaires were completed prior to start of treatment, at the end of treatment for EBRT or 2 weeks post-implant for brachytherapy, 6 months, 12 months, and 24 months post-treatment. Patients answered questions regarding frequency, urgency, and consistency of stool, abdominal and hemorrhoidal discomfort, rectal bleeding, stool continence, bedtime bowel movements, completeness of evacuation, and overall QOL (10 variables). Responses were analyzed using the Generalized Estimating Equation (GEE) approach. Trends were analyzed for significance comparing treatment modalities, time, and use of hormones.

Results

Mean age for EBRT treated was 70.3 yr, for HDR 62.5 yr and for LDR 69.5 yr. Nine variables were significantly affected by treatment modality and time. The use of hormones affected only hemorrhoidal discomfort and continence, negatively (p-value 0.0367 and 0.0077, respectively) (Tables 1 and 2). At the end of treatment, for all patients, HDR patients reported less discomfort than Pd, EBRT the most. By 12 months, EBRT and HDR patients had comparable responses (Pd worst), and, by 24 months, all treatment modalities were near equal (p-value of Treatment*Time 0.0024). Abdominal discomfort, nighttime bowel movements, and completeness of evacuation were significantly affected by time, being greatest at completion for all modalities, and improved with time, returning to baseline (p-value <0.0001 for all); treatment modality was not significant. Rectal bleeding showed an improvement from end of treatment through 12 months post-treatment, but at 24 months post-treatment, revealed a regression toward end of treatment values (p-value 0.0009). Frequency and urgency of stool were significantly affected by time and treatment (Pd least affected), but not by use of hormones (p-value Treatment*Time 0.0035 and 0.028, respectively). Pd had a better post-treatment outcome than EBRT or HDR. For all modalities, overall QOL was worst at completion then improved, but never returned to baseline (p-value <0.0001). At 24 months, overall QOL was best in EBRT patients (p-value 0.0128) (Table 3).

Conclusion

Hormone therapy negatively affected hemorrhoidal discomfort and continence, while follow-up time and treatment modality is a factor in most. Pd patients have fewer problems with frequency and urgency. By 24 months post-treatment, all patients have returned to baseline with respect to discomfort, nighttime bowel movements, and evacuation. Rectal bleeding returned to low end of treatment values at 24-months for all modalities. Patients treated with EBRT report better overall bowel QOL than HDR, with QOL of Pd patients being the worst.

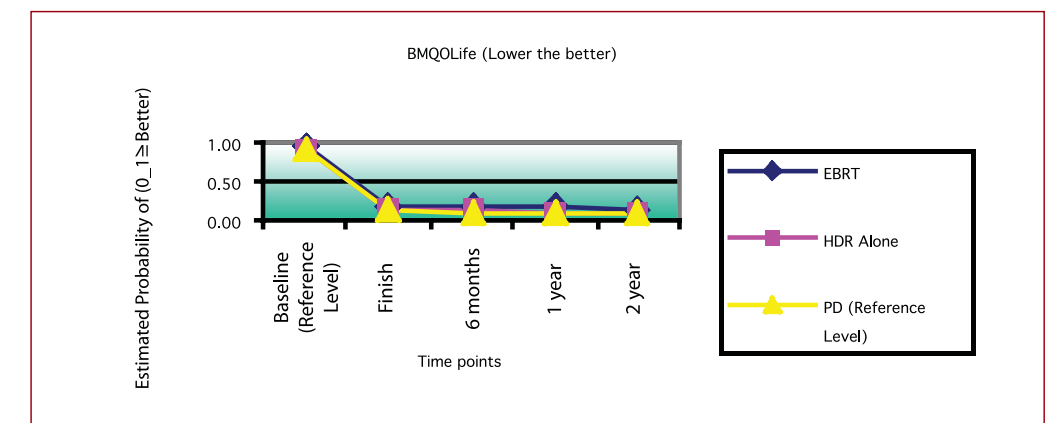
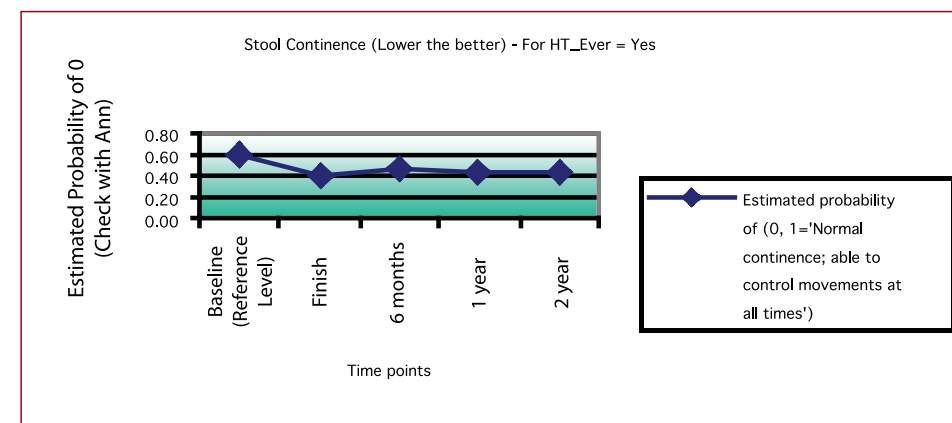
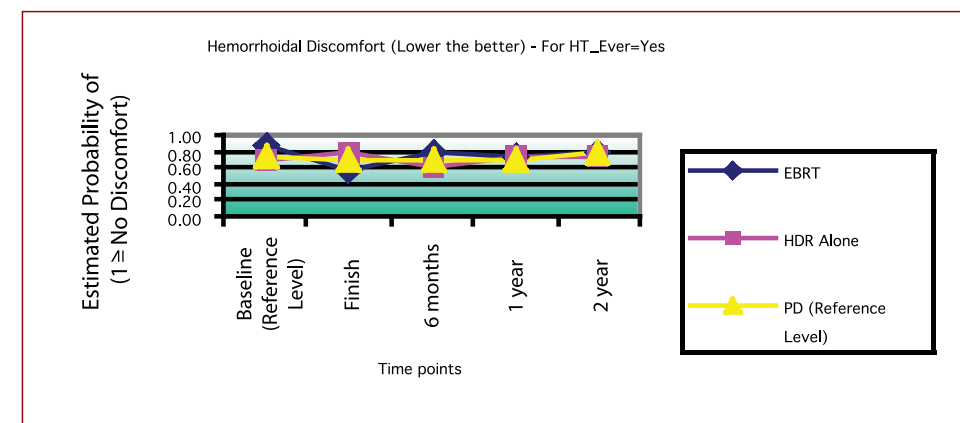
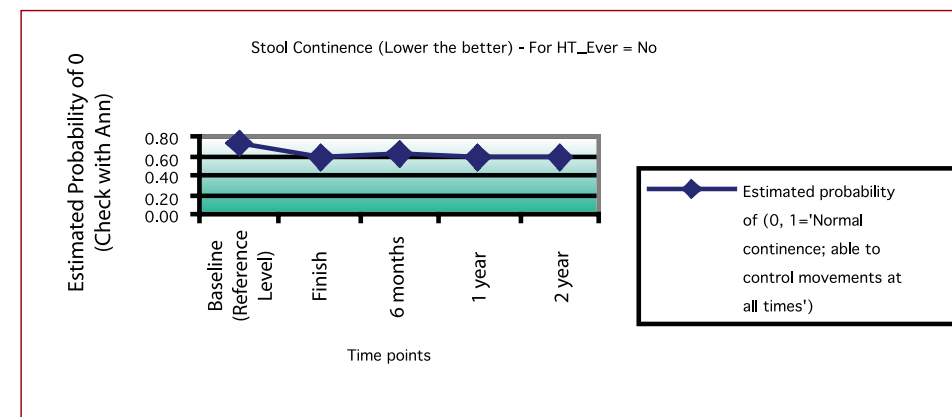
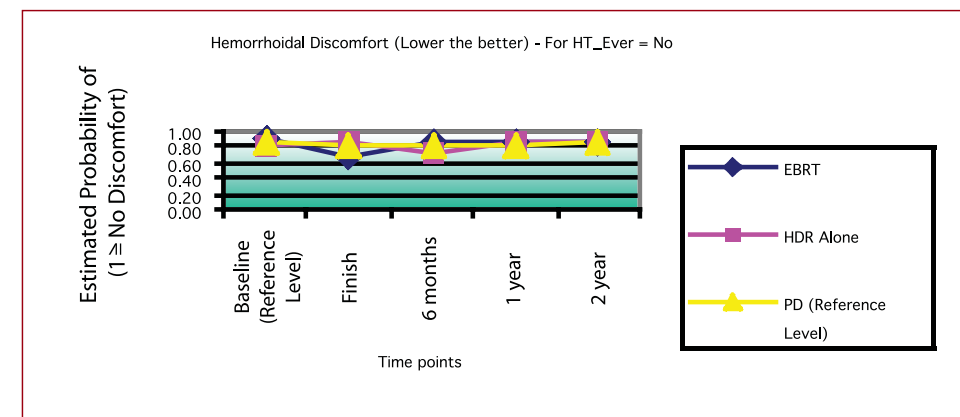


Table 1: Hemorrhoidal Discomfort - Yes vs. no

Table 2: Continence - Yes vs. no

Table 3: Bowel QOL