

Prostate Brachytherapy in Morbidly Obese Patients

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PURPOSE: Morbidly obese patients present challenges for definitive treatment of localized prostate cancer. Treatment can be technically challenging and these patients are often presented with limited options. Lower cure rates and higher rates of complications have been reported in this cohort of patients. We report our experience with transperineal prostate brachytherapy (PB) in morbidly obese patients.

METHODS AND MATERIALS: Sixteen morbidly obese patients (defined in this study as weight >300 pounds and Body Mass Index (BMI) of >34) underwent PB between November 1997 and December 2003 at a single institution, had adequate follow up, and completed quality of life surveys. Median height, weight and BMI were 72 inches (range 64-81 inches), 311.5 pounds (range 300-370 pounds) and 43.6 (range 34.3-52.9), respectively. Median age was 64.6 years. 9 patients were clinical stage T1c, five were T2, one was T3a and one patient could not be clinically staged. All patients were Gleason grade 6 or 7, and mean pretreatment PSA was 8.5 ± 6.4 ng/ml. 7 patients received hormonal therapy and 3 patients received external beam radiation therapy (EBRT) in addition to their modified peripherally loaded seed implant. Median follow-up time was 34.3 months. Quality of implant was assessed by post op CT based dosimetry with D90 and V100. ASTRO consensus definition was used to assess PSA failure. All patients were mailed the University of California-Los Angeles Prostate Cancer Index (UCLA PCI) to assess their urinary, bowel and sexual function and bother. UCLA PCI quality of life scale ranges from 0-100 with higher scores representing better outcomes.

RESULTS: All 16 patients were successfully implanted with no acute perioperative complications. There were no technical issues concerning ability to image the entire prostate nor were there issues with needles being long enough to implant the base. Mean post implant D90 and V100 were $129.6 \text{ Gy} \pm 36.1 \text{ Gy}$ and $86.6\% \pm 8.8\%$ respectively. At last follow up there were no PSA failures; mean PSA at last follow up was $0.4 \text{ ng/ml} \pm 0.3 \text{ ng/ml}$. The mean urinary function and bother scores for the study group was 80.7 ± 20.5 and 73.4 ± 35.9 , respectively. The mean bowel function and bother scores for the study group was 84.5 ± 20.0 and 76.5 ± 32.2 , respectively. Finally, patient sexual function and sexual bother scores were 31.1 ± 2.7 and 33.9 ± 25 , respectively.

CONCLUSIONS: Morbid obesity is not a contraindication to performing prostate brachytherapy (PB). PB is technically feasible in morbidly obese patients and appears to result in side effects and cure rates similar to the general PB population.