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Quality of life changes >10 years following postoperative radiotherapy after radical prostatectomy for prostate cancer.

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PURPOSE: To analyze long-term quality of life (QoL) changes related to postoperative radiotherapy (RT) after radical prostatectomy.

METHODS AND MATERIALS: Patients following postoperative 3D conformal RT in the years 2003-2008 with 1.8-2.0Gy fractions up to 66.0-66.6Gy (n=181) were surveyed using the EPIC (Expanded Prostate Cancer Index Composite) questionnaire before the beginning of RT (A), at the last day (B), two months (C), 1-3 years (D), 6-9 years (E) and 10-13 years (F) after RT.

RESULTS: Mean urinary bother/urinary incontinence bother/bowel bother score changes (in relation to baseline at time A) of 13/14/7 and 14/15/7 resulted at times E and F, respectively (p<0.01 for all comparisons). Sexual function scores decreased 6 and 8 points on average (p<0.01). Patient age at the time of RT had a considerable impact on urinary bother and urinary incontinence bother, with increasing differences over time comparing patients <68 vs. >68 years: 0 vs. 7 and 0 vs. 7 points at time D; 8 vs. 23 and 6 vs. 35 points at time F, respectively. Patients who did not respond to RT with a decreasing PSA had larger urinary/urinary incontinence bother and bowel bother score changes >10 years after treatment (25 vs. 12; p=0.04 / 36 vs. 10; p=0.03 and 20 vs. 5; p=0.07, respectively). A larger rectal dose was associated with larger acute and long-term bowel bother score decrease. No correlation was found between the dose to the bladder and QoL changes.

CONCLUSIONS: In contrast to early evaluations in the first years, significantly decreasing QoL in the urinary, bowel and sexual domains was found >5 years following RT. Aging is likely to be a major factor. Younger patients who responded to the treatment had the most favorable long-term QoL results. As 3D conformal RT was used in this study, intensity-modulated concepts could result in improved outcomes.

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KEYWORDS: EPIC; health-related quality of life; patient age; postoperative radiotherapy; prostate cancer; prostatectomy; prostatic neoplasms; radiotherapy; recurrence; survival

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