

"Obstructive Uropathy Following Simultaneous Irradiation For Prostate Cancer Measured By A Longitudinal Study Of The American Urological Association Symptom Index For Benign Prostate Hyperplasia"

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PURPOSE: Obstructive uropathy following brachytherapy for prostate cancer is documented in this report based upon a longitudinal study of 40,000 patient answers to the American Urological Association symptom index (AUA) questionnaire for benign prostate hyperplasia from a large number of men treated over the past decade.

MATERIALS & METHODS: From 1992-2002, 5,511 consecutive men with stage T1T4NxN+N0M0 prostate cancer were treated by simultaneous irradiation; transperineal prostate I-125 implant followed 21 days later by external beam irradiation. The median prostate volume was 35cc (range, 13-155cc) and the median pretreatment AUA index was 6 (range, 0-35). Beginning February 1996, the AUA index was given men pretreatment, during treatment and at each 6-month followup. The index was started pretreatment for 4,920 men and the remainder only posttreatment. Starting a year earlier, validated questions on dysuria and urinary bother were given men at these intervals. Median followup is 30 months (range, 3-120).

RESULTS: The average AUA index score and percent of men with an AUA index 20 pretreatment, 1-3 weeks postimplant, at end of external beam irradiation and at 12, 24, 36, 60 and 120-month followup was 7.6 and 5%, 15.0 and 28%, 14.9 and 25%, 10.1 and 10%, 9.7 and 9%, 8.5 and 5%, 7.8 and 6%, and 6.8 and 0%, respectively. A sudden increase in the degree of both dysuria and urinary bother is also noted postimplant with subsequent findings that parallel changes in the AUA index.

CONCLUSION: Since there is a sudden increase in AUS index scores, dysuria and urinary bother within 1-3 weeks of implantation but prior to external beam irradiation or any significant amount of radiation from the seeds, these findings suggest that obstructive uropathy from acute trauma to the prostate at implantation is the principle cause of undertreatment urinary morbidity which gradually resolves following completion of all irradiation.