

STRESS URINARY INCONTINENCE FOLLOWING TRANSURETHRAL RESECTION OF THE PROSTATE IN PATIENTS WHO HAVE UNDERGONE RADIATION THERAPY FOR PROSTATE CANCER

Hypothesis / aims of study

Urinary retention and intractable lower urinary tract symptoms (LUTS) are known complications of radiation therapy for prostate cancer. It is a widely held belief that transurethral resection of the prostate (TURP) is associated with high rates of stress urinary incontinence (SUI) with quoted rates as high as 70% [1]. We report our results and present a large series of patients with a history of radiation therapy to the prostate with documented bladder outlet obstruction or urinary retention who underwent TURP. The aim of this study was to determine post operative SUI rates with appropriate patient selection.

Study design, materials and methods

A retrospective review was performed to identify all patients who had undergone a TURP after radiation for prostate cancer since 2001 at one of two institutions by one of four surgeons. All patients had urodynamically documented bladder outlet obstruction or were in urinary retention. Patient age, pre-TURP symptoms, time interval from radiation to TURP, urodynamic parameters, post-operative symptoms, and further therapy were reviewed.

Results

Twenty six patients underwent a TURP after radiation for prostate cancer. Average age at the time of TURP was 71.5 ± 10.6 years (mean ± SD). Eleven patients received external beam radiotherapy alone, 8 patients received interstitial seed implantation, and 7 patients received combined therapy. Average time from radiation to TURP was 80.7 ± 66.3 months (range 6-257). Preoperatively, 17 patients were in retention and the remaining had severe frequency and urgency and 6 also had urge incontinence. Maximum detrusor pressure at maximum flow by urodynamics was 88.3 ± 39.6 cm H₂O, with a maximum flow rate of 3.6 ± 2.4 ml/sec. Post-void residual was 178 ± 157 ml preoperatively. All patients were able to void spontaneously after TURP. Although no patients developed significant SUI after TURP, two patients developed mild SUI requiring up to two pads per day (8% immediate post-op SUI rate). The six patients with urge incontinence significantly improved. Four patients required repeat TURP: 2 had cancer regrowth at 7 and 9 months post-op, one patient had persistent obstructing, benign tissue, and one patient had a stone in the prostatic fossa at 14 months post-op. Three patients required urethral dilation at 2, 3, and 6 months after TURP for urethral stricture. One patient developed a bladder neck contracture at 10 months post-TURP that was treated with resection of the bladder neck which resulted in severe SUI.

Interpretation of results

All patients improved from a symptomatic viewpoint. There was an 8% rate of post-operative SUI (2 patients) and a 31% reoperation rate (8 patients).

Concluding message

TURP is a valid treatment option for patients who have been treated with radiation therapy for prostate cancer and who have bladder outlet obstruction. TURP in post-radiation patients does not appear to be associated with unacceptable rates of SUI or other complications in appropriately selected patient.

1. Int J Radiat Oncol Biol Phys. 40:783, 1998

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HUMAN SUBJECTS: This study was approved by the MSKCC - Institutional Review Board and followed the Declaration of Helsinki Informed consent was not obtained from the patients.