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Long term urinary morbidity and continence outcomes for men undergoing bladder neck incision prior to low dose rate brachytherapy treatment for prostate cancer

Yaxley WJ [1, 2], Mackean J [3, 4], Desai D [5], Tsang G [3, 4], Dixon J [6], Samaratunga H [7], Delahunt B [8], Egevad L [9], Gardiner RA [2], Yaxley JW [2, 4, 6, 10]

1. Queen Elizabeth II Jubilee Hospital, Brisbane, Australia
2. The University of Queensland, School of Medicine, Brisbane, Australia
3. Genesis Cancer Care, Brisbane, Australia
4. Wesley Hospital, Brisbane, Australia
5. Toowoomba Hospital, Toowoomba, Australia
6. Wesley Urology Clinic, Wesley Hospital, Brisbane, Australia
7. Aquesta Uropathology, Brisbane, Australia
8. Department of Pathology and Molecular Medicine, Wellington School of Medicine and Health Sciences, University of Otago, Wellington, New Zealand.
9. Department of Oncology and Pathology, Karolinska Institutet, Stockholm, Sweden.
10. Royal Brisbane and Women's Hospital, Brisbane, Australia

Introduction:

Many men with prostate cancer have co-existing symptoms of bladder outflow obstruction (BOO). Early reports suggest that transurethral resection of the prostate (TURP) prior to LDRBT results in a higher risk of post implant urinary incontinence [1]. Our aim was to examine the long term urinary morbidity of a bladder neck incision (BNI) prior to LDRBT monotherapy for treatment of men with low and intermediate risk prostate cancer.

Methods:

A prospective database of 400 consecutive patients who underwent LDRBT between July 2003 and June 2015 for treatment of low or intermediate risk prostate cancer was retrospectively reviewed to assess urinary morbidity associated with a BNI prior to LDRBT.

Results:

400 patients underwent LDRBT, with a median follow up of 11.8 years. There were 46 men who underwent a pre-implant BNI for management of underlying BOO. In the BNI cohort, the mean age was 66.4 years and PSA was 6.9. There were 27 patients with Gleason score 3+3 (58.7%), 15 patients with 3+4 (32.6%) and 4 patients with 4+3 (8.7%). The average prostate volume was 36.9 ml (SD 9.1). The median urinary flow rate Qmax prior to BNI was 8.8 mL/s (SD 3.9) and one-year post BNI was 12.5 mL/s (SD 4.9, $p<0.001$). Three patients (6.5%) developed a urethral stricture. Urinary incontinence developed in one patient (2.2%), compared to 7.4% of the entire cohort.

Conclusion:

A pre-implant BNI for management of BOO does not increase the risk of urinary incontinence after treatment for prostate cancer with LDRBT and long term urinary morbidity remains low.

References:

1. Keyes M, Miller S, Pickles T et al. Late urinary side effects 10 years after low dose rate prostate brachytherapy: Population based results from a multi-physician practice treating with a standardised protocol and uniform dosimetric goals. *Int J Radiat Oncol Biol Phys*. 2014 Nov 1;90(3):570-8. doi: 10.1016/j.ijrobp.2014.06.037. Epub 2014 Aug 20.