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URINARY INCONTINENCE AFTER RADICAL PERINEAL PROSTATECTOMY: ROLE OF THE URETHRAL FUNCTIONAL LENGTH

Aims of Study

Post operative incontinence rates vary in litterature in terms of Authors' definition.When urodynamics criteria are used incontinence may be defined secondary to sphyncteric incompetence or to detrusorial functional abnormalities.The former seems to be the major etiologic factor as reported from earliest litterature. The aim of Authors is to classify incontinence type and rate after radical perineal prostatectomy trying to state the weigh of the urethral functional length in maintaining post operative urinary incontinence.

Methods

From September 1994 to September 2001 151 patients 60-83 years old (mean age 68,5 years) have been submitted to radical perineal prostatectomy;the surgical criteria of exclusion have been a basal PSA level more then 15 ng/ml or presence of bone metastases.All patients have been enrolled into a pelvic floor training trial from 7 days after catheter removal.Incontinent patients at 3 month follow up underwent full urodynamic assessement.Pre operative urodynamic assessement have been available in 33 patients. Continence has been defined as the needings to wear a single-a-day protective pad.

Results

42 out of patients resulted dry at 1 month after catheter removal, 107 pts at 4 month follow up, 130 pts at 6 month follow up and 135 pts at 12 month follow up.Incontinent patients (16 pts) complained a day time incontinence in 7,9% or a "continuos leakage" in 2,6% Urodynamic assessment in stabilized incontinent patients at 12 month follow up demonstrated low capacity (<250 ml) detrusor instability and/or low compliance in 10/16 of pts , sphyncteric weakness in 2/16 of patients and both detrusorial abnormalities and sphyncteric weakness in 4/16 pts.Out of the 33 patients urodynamically pre operatively monitored 8 pts were obstructed,2 (25%)of whom suffered from pre operative detrusor instability with normal compliance.6 (24%) of 25 non obstructed patients prior to radical prostatectomy revealed low (<250 ml) capacity detrusor instability with normal compliance. Overall pre operative mean MUCP was 62 cm H2O with a mean functional urethral length of 3,8 cm. Post operative mean MUCP was 48 cm H2O and the mean functional urethral length was 1,8 cm.The lowest MUCP and functional urethral length in post operative continent patients have been of 42 cm H2O and 1,6 cm respectively.

Conclusions

Detrusor instability in these series caused urinary incontinence at 3 month follow up only when a functional urethral length of less of 1,6 cm and a minimum MUCP less of 42 cm H20 was detected.Continous urinary leakage has been associated either to a low compliance bladder or a low (<250ml) capacity detrusor instability,rarely to sphincteric weakness alone. "De novo" functional detrusorial abnormalities after radical perineal prostatectomy have been shown in pre operative obstructed patients,but is still not possible to state them as the main cause of incontinence.Post prostatectomy incontinence probably has a multifactorial aethiology : low distal sphyncteric pressure ,low functional urethral length and detrusor instability.