ABSTRACT

SUBJECTIVE AND OBJECTIVE ANALYSIS OF URINARY BLADDER MORBIDITY FOLLOWING TYPE III RADICAL Hysterectomy FOR CARCINOMA UTERINE CERVIX

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Aim:
The aim of this study was to analyze subjectively and objectively the urinary bladder morbidity in terms of voiding dysfunction following type III radical hysterecctomy for carcinoma uterine cervix.

Methods and Material:
This was a prospective study done in patients diagnosed as carcinoma cervix or endometrium who underwent type III radical hysterectomy between January 2013 and January 2015. Consecutive uroflowmetry, post-voided residual volume, and voiding symptoms were performed preoperatively and postoperatively at 1st, 3rd, and 6th month.

Results:
A total of 51 patients were recruited in this study, including 46 diagnosed as carcinoma cervix and 5 diagnosed as carcinoma endometrium involving endocervix underwent type III radical hysterectomy. All patients had normal bladder sensation at 1st, 3rd, and 6th month. The voiding symptoms presented by patients after radical hysterectomy were straining, urinary incontinence, urgency, and dysuria. The overall voiding dysfunction rate at 1st, 3rd, and 6th month after surgery were 35.3 %, 13.8 %, and 3.9% respectively with straining as the most common voiding symptom. In comparison of preoperative data with 1st, 3rd, and 6th month data, the mean value of voided volume, maximum flow rate and average flow rate decreased and post-void residual urine increased. In the comparison of preoperative data with the postoperative data, however only the maximal flow rate was decreased with statistical significance till 6th month. In comparison of preoperative radiotherapy with no preoperative radiotherapy, maximum flow rate was decreased with statistical significance till 6th month. In comparison of adjuvant radiotherapy with no adjuvant radiotherapy maximum flow rate was decreased with statistical significance at 3rd month only. The association between straining and post-void residual urine was statistically significant till 3rd month. The
association between post-void residual urine and catheterization was statistically significant at 1\textsuperscript{st} month only.

**Conclusion:**
In conclusion, type III radical hysterectomy gives rise to transient alteration in the neurophysiology of the lower urinary tract. Although most of these changes return to normal within a certain period of time (6-12 months), it is suggested to pay attention to voiding symptom of straining, and the uroflow parameter of maximum flow rate, especially in patients who receive radiotherapy. The uroflow curve and post-void residual urine also require note in patients with voiding symptom, straining. Larger prospective study is needed to determine the long-term effect of urinary bladder morbidity following type III radical hysterectomy.

**Keywords:** Urinary Bladder, Radical Hysterectomy, Radiotherapy, Voiding dysfunction, Uroflowmetry, Post-void residual urine.