

Research Article

Evaluation of surgical outcomes and complications of patients who underwent ileal conduit (IC) urinary diversion in comparison with those who underwent orthotopic neobladder.

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Abstract

Objective: Evaluate surgical outcomes and complications of patients who underwent ileal conduit (IC) urinary diversion in comparison with those who underwent orthotopic neobladder. **Patients and methods:** This study included one hundred and thirteen patients classified into two Groups. **Group (A):** Patients underwent W- neobladder (49 patients). **Group (B):** Patients underwent ileal conduit (64 patients). One year after operation, FACT Bladder questionnaire Version 4, Arabic version was used to compare quality of life between two groups. Serum creatinine was measured at 3, 6th and 12th months postoperatively. **Results:** Postoperative quality of life and satisfaction is cardinaly dependent on patients' expectations. Pre-operative counselling, strict selection criteria and psychosocial assessment would enable patients being recommended the most appropriate procedure for their clinical and social setting. **Conclusion:** we concluded that quality of life is better in ileal conduit patient when compared with ONB patients at one year postoperatively and this could be explained by high morbidity associated with orthotopic neobladder. Morbidity and complications are more common in patients with ONB

Keywords: orthotopic neobladder, ileal conduit, urinary diversion

Introduction

Radical cystectomy followed by urinary diversion is regarded as the 'gold standard' treatment for carcinoma invading the bladder muscle without detectable hematogenous or lymphogenous metastases^(1, 2). The optimal form of urinary diversion after RC in terms of patient QoL remains controversial. A major obstacle in assessing patient QoL after urinary diversion is the lack of a universal definition of the term "quality of life" which may differ between cultures, countries and study groups⁽¹⁾.

Patients and Methodology

This is a prospective observational comparative hospital-based study aimed to compare quality of life and renal function between orthotopic urinary diversion and ileal conduit after radical cystectomy. This

study included one hundred and thirteen patients classified into two groups.

Group (A): Patients underwent W- neobladder (49 patients).

Group (B): Patients underwent ileal conduit (64 patients). One year after operation, FACT Bladder questionnaire Version 4, Arabic version was used to compare quality of life between two groups. Serum creatinine was measured at 3, 6th and 12th months postoperatively.

Results

a) **Age (years):**

b) **Gender :**

In group (A); 89.8% of patients were males and 10.2 % were females.

In group (B); 82.8% of patients were males and 17.2 % were females.

Age (years)	Group A (N=49)	Group B (N=64)	p-Value
Mean \pm SD	59.3 \pm 8.3	61.9 \pm 7	0.1**

Table (2): comparison between two groups in tumor histology

Histology	Group A (N=49)	Group B (N=64)	p-value
TCC	36 (73.5%)	58 (90.6%)	0.05*
SCC	11 (22.4%)	5 (7.8%)	
Adenocarcinoma	2 (4.1%)	1 (1.6%)	

c) Postoperative Complication:

1) Early postoperative complication

In group (A), wound complication was found in 21 cases (42.9%), leakage in 14 cases (28.6%), ileus in 14 cases (28.6%), and thromboembolic complication in 3 cases (6.1%).

In group (B), wound complication was found in 33 cases (51.6%), leakage in 6 cases (9.4%), ileus in 12 cases (18.8%), thromboembolic complication in 6 cases (9.4%).

2) Late postoperative complication

In group (A), nocturnal incontinence was found in 9 cases (18.4%), chronic urine retention in 3 cases (6.1%), ureteroileal stricture in 2 cases (4.1%), urethrorileal stricture in 1 cases (2%), recurrent UTIs in 3 cases (6.1%) and hernia in 4 cases (8.2%).

In group (B) ureteroileal stricture was found in 3 cases (4.7%), recurrent UTIs in 9 cases (14.1%) and hernia in 3 cases (4.7%).

Patients had high scores for SWB. Mean SWB was 21.8 (\pm 1.8) of a total of 28 points. However, patients had PWB (13.7 \pm 1.4 of a total of 28 points), EWB (14.4 \pm 3.2 of a total of 24 points), FWB (14.4 \pm 3.2 of a total of 28 points), bladder-specific subscale (17.8 \pm 5.8 of a total of 48 points) and FACT-BL total scores (82.4 \pm 7.4 of a total of 156 points) approximately half the maximum obtainable scores.

In group (B):

Patients had high scores for SWB. Mean SWB was 21.7 \pm 1.8 of a total of 28 points. However, patients had PWB (15 \pm 1.6 of a total of 28 points), EWB (15.3 \pm 3.9 of a total of 24 points), FWB (16.2 \pm 3.3 of a total of 28 points), bladder-specific subscale (20.5 \pm 4.9 of a total of 48 points) and FACT-BL total scores (88.9 \pm 7.7 of a total of 156 points) approximately half the maximum obtainable scores. IC showed better scores in all domains than ONB and reached statistical significance in PWB, FWB, over all FACT-G, Bladder-specific subscale and FACT-BL total score (P value=0.01, 0.01, 0.001, 0.001, 0.001 respectively)

d) Quality of Life (QOL) Scores:

In group (A):

Table (3): Comparison between preoperative and 6 month postoperative Serum creatinine level

Group A (n=49)			Group B (n=64)		
6 months postoperative Creatinine	Preoperative Creatinine	p-value	6 months postoperative Creatinine	Preoperative Creatinine	p-value
Mean \pm SD	Mean \pm SD		Mean \pm SD	Mean \pm SD	
1.3 \pm 0.3	0.9 \pm 0.2	0.01*	1.4 \pm 0.5	1.3 \pm 0.7	0.02*

Discussion

In our study; we found that quality of life is better in ileal conduit patient when compared with ONB patients at one year postoperatively and this could be explained by high morbidity associated with orthotopic neobladder. Similarly, Anderson and colleagues reported higher quality of life at 1 year postoperatively in ileal conduit urinary diversion patients compared to neobladder patients⁽³⁾. On the other hand, Hobisch et al., reported that ONB patients had better all domains of HRQOL in comparison to IC patients⁽⁴⁾. Also, Philip et al., reported more active life style and better HRQOL in ONB patients⁽⁵⁾. In our study, IC patients showed better scores in all domains than ONB and reached statistical significance in PWB, FWB, over all FACT-G, Bladder-specific subscale and FACT-BL total score. In contrast, study done by Kikuchi et al., did not find any difference between the two groups in any of four domains of FACT-G⁽⁶⁾. Ileal conduit (IC) patients have relatively better bowel habit scales than ONB patients. This may be due to resection of larger intestinal segment in ONB than in IC. This is contradictory to previous report by Hedgepeth et al., who stated that there was no difference between both groups as regard bowel habits⁽⁷⁾.

Conclusion: Postoperative quality of life and satisfaction is cardinally dependent on patients' expectations. Pre-operative counselling, strict selection criteria and psychosocial assessment would enable patients being recommended the most appropriate procedure for their clinical and social setting. There was statistical significant increase in serum creatinine level in ileal conduit patients when compared with patients with orthotopic neobladder this could be explained by the indications of ONB which usually performed in young age patients with more

favorable renal function. Morbidity and complications are more common in patients with ONB.

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