769

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EFFICACY AND SAFETY OF AUGMENTATION ILEOCYSTOPLASTY FOR THE TREATMENT OF INTERSTITIAL CYSTITIS

Hypothesis / aims of study

Bladder pain syndrome/interstitial cystitis(BPS/IC) is a chronic condition that characterized by irritative bladder symptoms and suprapubic pain. Although a number of nonsurgical treatment modalities have been used, some patients have refractory conditions that do not respond at all to symptomatic treatment. Augmentation ileocystoplasty is one of the last options for BPS/IC refractory to conservative treatments. Reported long-term success rates of ileocystoplasty have varied from 25 to 90%. The aims of this study were to evaluate the long term efficacy and safety of augmentation ileocystoplasty for severe symptomatic patients with BPS/IC.

Study design, materials and methods

We prospectively evaluated 26 patients, who had undergone augmentation ileocystoplasty by single surgeon from July 2006 to February 2010 for severe BPS/IC refractory to conservative treatments. We analyzed the patients by pain visual analogue scale (VAS), 3-day micturition time chart, O'Leart-Sant IC symptom (ICSI) and IC problem (ICPI) indexes before and after the operation. We performed voiding cystourethrography(V.C.U.G) at 3 months follow-up and urodynamic study at 6 months follow-up of the operation. Patients were interviewed for the improvement of symptoms by using global response assessment (GRA) and for interaction between the degree of symptoms and limitation of activities by using patient global assessment (PGA) questionnaires. We evaluated the responsiveness of the ICSI according to reference standards of mean change in the ICSI scores ; 2.3 in those who worsened, -1.5 in stable respondents, and -5.4 in those who improved (1).

Results

Twenty six (mean age 58.69 ± 10.03 years, 25 women and 1 man) patients were evaluated. The follow-up range was 4 to 34 months. The mean symptom duration was 3.9 ± 2.0 years. Pain VAS, voiding frequency, ICSI and ICPI have improved significantly after the operation ($p<0.05$). Functional bladder capacity and maximal cystometric capacity have increase significantly after treatment. (Table) According to the responsiveness of the ICSI, 73% of patients were improved and 19% were stable respondents. There was no patient who was worsened. Eighty-eight percents (24/26) of patients improved their symptoms after treatment according to GRA questionnaires. With PGA questionnaire, 67% (17/26) of patients had no limitation of normal activities and five patients noted that there was limitation of some normal activities. Perioperatively, there was no complication such as gastrointestinal problem like ileus. Four patients showed vesicoureteral reflux without upper urinary tract damage according to V.C.U.G. at 3 months after operation. Five patients had urinary tract infection that had resolved with antibiotic treatment. One patient showed urothelial carcinoma. Four patients were needed to perform clean intermittent self-catheterization. Of them, 3 patients had answered that their symptoms were moderately improved by global response assessment. There was no severe complication with surgery at long-term follow-up.

Interpretation of results

Our results showed augmentation cystoplasty has good outcomes that pain and frequency had decreased and bladder capacity has increased significantly. There's no severe complication with surgery for short term and long term follow up. The finding that in some clean intermittent self-catheterization is required after surgical reconstruction is in accordance with previous experience. It had known that clean intermittent, self-catheterization is well accepted by patients because the overall situation is so markedly improved after surgery.We recommend augmentation cystoplasty is effective and safe treatment method for severe symptomatic interstitial cystitis.

Concluding message

Augmentation ileocystoplasty for severe symptomatic BPS/IC is one of the effective and safe treatment options with a high probability of cure or marked improvement of symptoms.

Table. The change of pain visual analogue scale, urodynamic parameters, and O'Leary-Sant IC symptom(ICSI) and problem(ICPI) index before and after augmentation cystoplasty

	Baseline	Post-op(6months)	p-value
Pain visual analogue scale	8.73 ± 1.75	.96 ± 1.28	<0.05
Micturition frequency	21.55 ± 2.05	10.74 ± 5.35	<0.05
Maximum flow rate(ml/sec)	13.84 ± 8.45	18.16 ± 10.49	0.148
Maximum voided volume (cc)	130.53 ± 27.10	283.16 ± 63.43	<0.05
Maximal cystometric capacity (cc)	206.48 ± 17.91	377.38 ± 90.50	<0.05
Post voiding residual urine(cc)	31.88 ± 30.51	150.06±190.27	0.004
O'Leart-Sant IC-Q quastionnaires			

IC-Symptom index(0-20)	17.36 ±	2.84	8.56 ±	5.41	<0.05
IC-Problem index(0-16)	15.00 ±	1.52	6.12 ±	4.40	<0.05

VAS : visual analog scale, O'Leary-Sant IC symptom index : ICSI, O'Leary-Sant IC problem index : ICPI

References
1. Propert KJ et al Responsiveness of symptom scales for interstitial cystitis Urology 2006;67:56-59

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What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**Yes**
Specify Name of Ethics Committee	**Samsung Medical Center Institutional Review Board**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**