

16 (88.8%) biofeedback method, 5 Fleet enema solution, 13 Soft-Soap (s-s) enema solution, 1 cc NaHPO₄ 160 mg/ml, NaH₂PO₄ 60 mg/ml가, solin enema solution NaHPO₄ 180 mg/ml, NaH₂PO₄ 480 mg/ml가, S-S enema solution 5% cocamide diethanolamide 8% triethanol aminolauryl sulfate ()가, 4.5 ml/kg (0.83~31.8 ml/kg), 2~3, 1, 18 가, 24 (2~54) ACE가, Toogood (12) scoring system, 가, 가, 80~150 cc (Table 2).

Table 1. Patient demographics and op procedure

Case	Sex	Age (yr)	Dx	Preop mx	Op procedure	ACE
1	F	13.9	MMC	None	Reversed appendicostomy	Success
2	M	16.9	MMC	Enema	Orthotopic appendicostomy	Success
3	M	6.9	MMC	None	Orthotopic appendicostomy	Success
4	M	16.4	MMC	Enema	Neoappendicostomy	Success
5	F	7.6	MMC	Enema	Neoappendicostomy	Success
6	M	12	MMC	Enema	Orthotopic appendicostomy	Failure: psychotic problem
7	F	13.3	MMC	Enema	Neoappendicostomy	Failure: abd.pain
8	F	5.9	MMC	Enema	Neoappendicostomy	Failure: stoma stricture
9	M	7.9	MMC	Enema	Orthotopic appendicostomy	Success
10	F	11.1	MMC	Enema	Neoappendicostomy	Success
11	F	7.6	MMC	Enema	Neoappendicostomy	Success
12	F	15.6	MMC	Enema	Orthotopic appendicostomy	Success
13	M	6.6	MMC	Enema	Neoappendicostomy	Success
14	M	8.1	MMC	Enema	Neoappendicostomy	Success
15	F	11.7	MMC	Enema	Neoappendicostomy	Success
16	F	8.9	MMC	Enema	Neoappendicostomy	Success
17	F	14.9	MMC	Enema	Neoappendicostomy	Success
18	M	6.4	MMC	Enema	Neoappendicostomy	Success

Table 2. Postoperative scoring after ACE procedure for treatment of fecal incontinence

Criterion	Score
Occurrence of postoperative soiling	
None	10
<1 per month	8
<1 per week	6
<1 per day	4
>1 per day	2
Surgical technical success	
Catheter insertion time	
Immediate	5
<5 min	4
<10 min	3
<15 min	2
>15 min	1
Time required for completion of washout	
<30 min	5
<45 min	4
<60 min	3
<90 min	2
>90 min	1
Postoperative quality of life	
Ideal	5
Great improvement	4
Definite improvement	3
Some improvement	2
Little improvement	1
No improvement	0

Optimal score is 25 points.

Table 3. Complication of ACE

	No. of patients	%	
Abd. pain	Mild	12	66.6
	Severe	2	11.1
Diarrhea		1	5.5
Nausea		1	5.5
Vomiting		1	5.5
Epigastric soreness		1	5.5
Stoma stricture	Mild	1	5.5
	Severe	1	5.5
Stoma leakage		2	11.1
Stoma infection		1	5.5

1)

(Table 3).

가 18
12 (66.6%), 2 (11.1%)
Phosphate가 Fleet enema solution
solin enema solution 5 4 (80%)
1 (20%)
S-S enema 13 11 (84.6%)
2

1 (7.7%)
5
2 (11.1%)
1 (5.5%) reversed appendicostomy
neoappendicostomy
2 (11.1%) cecal flap
6
1
(5.5%)
2) ACE 15
18 (2002. 8) ACE
15 (83.3%) Table 4
neoappendicostomy가 10 (66.7%), ortho-
topic appendicostomy가 4 (27%), reversed appendicostomy
가 1 (6.7%), S-S enema
가 9 (60%), 3 (20%), 2 (13.3%), solin
1 (6.7%)
7.5 fr (4~10 fr)
가
가 9 (60%), 1
가 4 (26.6%), 1
가 1 (6.7%)
87% 가
가
8 (53.3%), 5 가 6 (40%), 10
가 1 (6.7%) 93% 가

40 (32~150) , 45
 가 12 (80%), 90
 가 2 (13.3%), 90
 가 1 (6.7%)
 가
 ‘ (ideal)’
 (great improvement)’
 (definite)’
 (some)’ ‘
 가 1 (6.7%) 93%

3) ACE가 3

- 18 3 ① ACE
- ② ACE
- ③ ACE

ACE
 ACE가
 antireflux method
 (1-7,15,19,20)
 orthotopic appendicostomy, reverse appen-
 dicostomy, neo-appendicosto-
 my , Malone (1) ACE
 reversed appenedicosotomy
 , Squire (15) orthoto-
 pic appendicostomy
 reversed appen-
 dicostomy 가
 2
 cecal flap neoappendicostomy
 , orthotopic appendicostomy 가



ACE ①
 ② ③
 ④ (1-6)
 ACE
 가
 (2,7,13,14)

Graft (14) Krogh (16) ACE 가
 (27~55%)
 (6.6%) (3.7%)
 ACE 18
 2 (11.1%) , 1 (5.5%)
 가
 1998 ACE
 reversed appendicostomy

ACE 가
 , Malone (13)

73% (13)
 38%
 18
 15 (83%) ACE

ACE
 cecal flap
 . Monti (5) mitrofanoff ileal flap
 가 가
 cecal flap
 ileal flap 가
 transeverse colonic flap
 ACE Perez (21)
 가
 Shandling (10) Peppo

가
 ACE가
 가
 , 5 70% 5
 24%
 (8,13) 가 5 10
 16 8 (: 10)
 가
 83%

(11) ,
 liquoric root solution, arachis oil
 .(13,15)
 18 2 (11.1%)
 가 , ACE가 1 (5.5%)
 가 phosphate enema phosphate가 fleet solution solin
 solution saline , 25~56% 80% , S-S
 , 10% enema 84.6% ,
 .(13,17,18)
 phosphate ,

Table 4. Surgicla technical results, soiling, quality of life in patients treated with ACE procedure

Pt	Sex	Age (yr)	Tube	Solution	Volume (cc/kg)	Foley No(fr)	Washout time (min)	Score					Total score
								F/U (mo)	Soiling	Catheter	Washout insertion	QOL	
1	F	13.9	R	Tap water	21.3	4	40	54	10	4	4	5	23
2	M	16.6	O	Solin	0.83	6	150	54	6	5	1	4	16
3	M	6.9	O	Soap water	17.9	6	61	52	4	5	2	1	12
4	M	16.4	N	S-S	15.5	6	50	47	10	5	4	4	23
5	F	7.6	N	Soap water	6.8	10	35	48	6	5	4	5	20
6	M	7.9	O	S-S	11.4	6	32	35	10	5	4	5	24
7	F	11.1	N	S-S	5.4	10	32	29	10	5	4	5	24
8	F	7.6	N	S-S	2.75	5	35	24	10	4	4	4	22
9	F	15.6	O	S-S	4.5	6	40	16	10	5	4	4	23
10	M	6.6	N	Tap water	31.8	8	80	15	2	4	2	2	10
11	M	8.1	N	S-S	3.85	10	33	12	6	5	4	4	19
12	F	11.7	N	Tap water	3.25	8	42	12	10	4	4	5	23
13	F	8.9	N	S-S	9.1	6	41	11	6	3	4	3	16
14	F	14.9	N	S-S	3.4	8	40	4	10	4	4	4	22
15	M	6.4	N	S-S	4.5	8	35	2	10	4	4	4	22

R = reversed appendicostomy; O = Orthotopic appendicostomy; N = neoappendicostomy.

Table 5. Comparison to op procedure, enema solution according to scoring system (Table 2)

Op procedure	No. of pt (%)	Soiling	Cath. insertion	Washout	QOL	Score
Neoappendicostomy	10 (66.7)	8	4.3	3.8	4	20.1
Orthotopic appendicostomy	4 (26.6)	7.5	5	2.75	3.5	18.75
Reversed appendicostomy	1 (6.7)	10	3	4	5	22
Enema solution	No. of pt (%)	Soiling	Cath. insertion	Washout	QOL	Score
S-S	9 (60)	9.1	4.4	4.4	4.1	22
Tap water	3 (20)	7.3	4	3.3	4	18.7
Soap water	2 (13.3)	5	5	3	3	16
Solin	1 (6.7)	6	5	1	4	16

