

The effect of hybrid seton on anal continence and quality of life in transsphincteric fistulas.

Long-term follow-up.



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The effects of hybrid seton on anal continence and quality of life in transsphincteric fistulas. Long-term follow-up.

BACKGROUND: The aim of this study is to evaluate long-term results of hybrid seton on anal continence and quality of life in transsphincteric fistulas.

METHODS: Between 2011-2013 eighty patients who completed 7-year follow-up among 154 patients who were operated for perianal fistula were included. Of the 50 patients participating, 42 (84%); 31 men, 11 women) returned all questionnaires. The proctological findings of the patients were compared with the newly obtained ones retrospectively. Demographic characteristics of the patients, preoperative and postoperative 3rd month and 7th year Cleveland Clinic Incontinence Score, preoperative and postoperative 3rd month and 7th year Fecal Incontinence Quality of Life and seton fall times were assessed.

RESULTS: Thirty (73.8%) of 42 patients were male and 11 (26.2%) were female. The mean age of male patients was 36.3 ± 10.3 (18-57), and the mean age of female patients was 41.2 ± 12.1 (25-64) years. The mean time drop off the elastic seton was 19 ± 2.40 days (range 12-30 days). The preoperative and postoperative 3rd month Fecal Incontinence Quality of Life values™ were compared and improvement in lifestyle quality at the postoperative 3rd month was found to be statistically significant ($p < 0.01$). When the preoperative and postoperative 7th year were compared in terms of Fecal Incontinence Quality of Life, behavior, life style and depression improved positively ($p < 0.01$).

CONCLUSION: Hybrid seton in transsphincteric perianal fistula surgery is an effective and reliable method for preserving anal continence and improving quality of life.

KEY WORDS: Anal fistula, Fecal incontinence, Quality of life

Introduction

Anal fistulas are non-physiological tract line connections from the anal canal or the distal rectum to the perianal skin. The incidence of an anal fistula developing from an anal abscess ranges from 15 to 38 percent¹⁻³. Adult males are twice as likely to develop an abscess and/or fistula compared with women⁴.

The principles of fistula surgery are to eliminate the fistula, prevent recurrence and preserve sphincter function. The surgical management of perianal fistulas remains a challenge because the consequences of anal surgery potentially include profound fecal incontinence (FI) and impaired quality of life (QOL)⁵. There is a risk of sphincter muscle damage during fistulotomy, and this might lead to an unacceptable risk of anal incontinence (AI) of varying degrees. Several alternative treatment strategies have been practiced in order to preserve the sphincter mechanism, including draining setons, cutting setons, advancement flaps, fistulectomy, anal fistula plug, ligation of the intersphincteric fistula tract (LIFT), fistulotomy with reconstruction of the sphincter mechanism or fibrin glue⁶⁻¹⁶. This study was similarly designed

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in order to evaluate the long-term results of previous study "Hybrid seton for the treatment of high anal fistulas: result of 128 consecutive patients", which we had obtained positive results in the short-term. In this study we aim to evaluate the long-term results of hybrid seton on anal continence and quality of life in transsphincteric fistulas.

Methods

Between March 2011 to May 2013 eighty patients who completed 7-year follow-up among 154 patients who were operated for perianal fistula were included. Thirty patients with a history of inflammatory bowel disease or previous anal fistula surgery, recurrence (during follow-up) patients with fistulotomy / fistulectomy performed for superficial fistulas, complicated anal fistula diagnosis (extrasphincteric, suprasphincteric, horseshoe fistulas) were excluded from the study. Of the 50 patients participating, 42(84%; 31 men, 11 women) returned all questionnaires. The proctological findings of the patients were compared with the newly obtained ones retrospectively. Demographic characteristics of the patients, operative findings, preoperative and postoperative 3rd month and 7th year Cleveland Clinic Incontinence Score, preoperative and postoperative 3rd month and 7th year Fecal Incontinence Quality of Life and seton drop times were assessed. The indication for the use of the hybrid seton in this study was a single fistula involving at least one third of the sphincter muscles.

SURGERY

All operations were performed by the colorectal surgeons with the same experience in this field. All operations

were performed under spinal anesthesia, in prone jack-knife position. The seton was created by cutting thin circular strip from a surgical glove (No. 7,5 latex surgical glove) (Fig. 1, Fig. 2) The portion of the tract outside the sphincters was laid open and elastic seton was tied over itself without excessive tension.

DATA ANALYSIS

Statistical analyses were performed by SPSS 15.00 (SPSS Inc, Chicago, IL, USA). The results were expressed as mean \pm SD (standart deviation). The Dunnett t-test was used to compare the CCIS, FIQLI scores. The p value <0.01 was accepted as statistically significant.

Results

Thirty-one (73.8%) of 42 patients were male and 11 (26.2%) were female. The mean age of male patients were 36.3 ± 10.3 (18-57), and female patients were 41.2 ± 12.1 (25-64) years. The mean time drop off the elastic seton was 19 ± 2.40 days (range 12-30 days). There was no statistically significant difference between preoperative and postoperative 3rd month and 7th year CCIS values™ ($p > 0.01$). The preoperative and postoperative 3rd month FIQL values™ were compared, no statistically significant difference was found in terms of behavior, embarrassment and depression ($p > 0.01$) (Table I), while the improvement in lifestyle quality at the postoperative 3rd month was found to be statistically significant ($p < 0.01$) (Table I).

The preoperative and postoperative 7th year were compared in terms of FIQL, no statistically significant difference was found in terms of embarrassment ($p > 0.01$) (Table I), but it was found that the behavioral style, depression and quality of life improved positively ($p < 0.01$) (Table I).

TABLE I - Pre- and postoperative FIQLI item scores of the patients.

	Preoperative (mean \pm SD)	Postoperative 3rd month (mean \pm SD)	Postoperative 7th year (mean \pm SD)	p
FIQLI-lifestyle	3,86 \pm 0,13	3,95 \pm 0,13	3,97 \pm 0,13	0.002* 0.001**
FIQLI-coping/behavior	3,87 \pm 0,09	3,88 \pm 0,09	3,94 \pm 0,09	0.06 0.001**
FIQLI-depression	3,89 \pm 0,07	3,89 \pm 0,07	3,92 \pm 0,07	0,09 0.001**
FIQLI-embarrassment	3,95 \pm 0,11	3,95 \pm 0,11	3,9838 \pm 0,11	0.09 0.061

Comparisons were performed by the Dunnett t-test

*Preoperative versus 3rd month

**Preoperative versus 7th year



Fig. 1

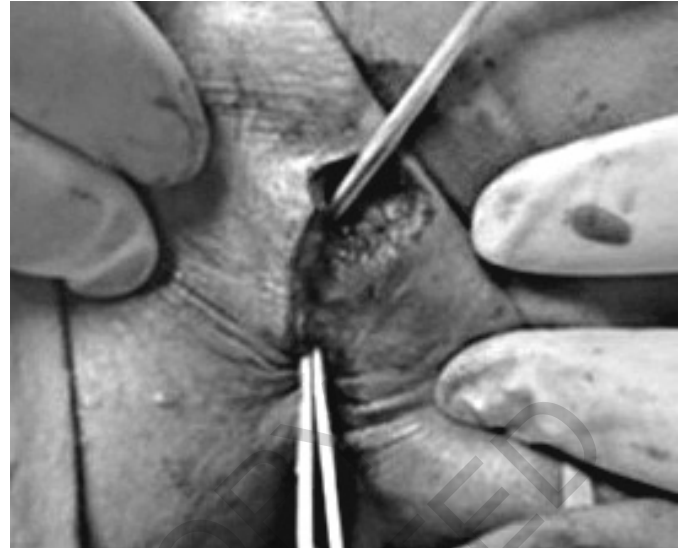


Fig. 2

Discussion

This study with an average follow-up of 7 years was designed as a continuation of our previous study.¹⁷ Recurrence developed in 8 (5,1%) of 154 patients. FIQLI scores were found to be better than expected in patients with complete recovery. It was found that sphincter function was preserved in the long term. Especially lifestyle changes, coping/behavior and depression scores were found to be improved ($p < 0,01$).

Two most important complications of a fistulotomy with a cutting (snug) seton are recurrence and incontinence. The success rates for snug setons range from 82 to 100 percent^{18,19}; however, long-term incontinence rates can exceed 30 percent²⁰⁻²². In our study, no statistically significant difference was found between preoperative and postoperative 3rd month and 7th year CCIS values ($p > 0,01$). Advancement flaps and ligation of the intersphincteric fistula tract methods are successful sphincter preserving procedures. The success of the advancement flaps method is related to the experience of the surgeon. The wide range of results is due to patient populations, heterogeneity in technique and experience. Advancement flap techniques recurrence is 0-40%²³⁻²⁷.

Ligation of the intersphincteric fistula tract (LIFT) was first described in 2009 for the treatment of complex fistulas.²⁸ It is a sphincter preserving procedure. Although the outcome data vary by fistula type, the standard LIFT procedure has been shown to provide 57 to 94 percent fistula healing²⁹⁻³¹.

The advantage of hybrid seton over other cutting setons is that the procedure will not repeated again and again. Thus, every time the patient do not feel pain and be in comfort. The most important problem of this technique is the adjustment of the elastic seton tension. When the

elastic seton was tightened excessively, the cutting process is fast and sphincter preservation did not provided.

This study is limited because it was conducted by a selected case group and experienced surgeons.

The hybrid seton method is a good option for complex anal fistula treatment. This technique is easier than other sphincter preserving techniques. Postoperative patient comfort is high and patient follow-up is easy. Long-term results of the hybrid seton technique have shown that it is successful in maintaining continence. The recurrence rate is acceptable.

Conclusion

Hybrid seton in transsphincteric perianal fistula surgery is an effective and reliable method for preserving anal continence and improving quality of life.

Riassunto

Lo scopo di questo studio è valutare i risultati a lungo termine dell'impianto di un setone ibrido sulla continenza anale e sulla qualità della vita nelle fistole transsfinteriche.

METODI: Tra il 2011 e il 2013 sono stati inclusi ottanta pazienti che hanno completato un follow-up di 7 anni tra 154 pazienti operati per fistola perianale. Dei 50 pazienti partecipanti, 42 (84%) 31 uomini, 11 donne) hanno restituito tutti i questionari. I risultati proctologici dei pazienti sono stati confrontati retrospettivamente con quelli di nuova acquisizione. Sono state valutate le caratteristiche demografiche dei pazienti, il punteggio di incontinenza preoperatoria e postoperatoria del 3° mese

e 7° anno della Cleveland Clinic, la qualità di vita dell'incontinenza fecale preoperatoria e postoperatoria del 3° mese e 7° anno e i tempi di caduta del setone.

RISULTATI: Trenta (73,8%) su 42 pazienti erano uomini e 11 (26,2%) erano donne. L'età media dei pazienti di sesso maschile era di $36,3 \pm 10,3$ (18-57) e l'età media delle pazienti di sesso femminile era di $41,2 \pm 12,1$ (25-64) anni. Il tempo medio di caduta del setone elastico è stato di $19 \pm 2,40$ giorni (intervallo 12-30 giorni). I valori della qualità della vita dell'incontinenza fecale preoperatoria e postoperatoria al 3° mese sono stati confrontati e il miglioramento della qualità dello stile di vita al 3° mese postoperatorio è risultato statisticamente significativo ($p < 0,01$). Quando il 7° anno preoperatorio e postoperatorio sono stati confrontati in termini di qualità della vita dell'incontinenza fecale, il comportamento, lo stile di vita e la depressione sono migliorati positivamente ($p < 0,01$).

CONCLUSIONE: Il setone ibrido nella chirurgia della fistola perianale trans-sfinterica è un metodo efficace e affidabile per preservare la continenza anale e migliorare la qualità della vita.

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