ANALYSIS OF SECONDER ANAL SPHINCTER REPAIR IN PATIENTS WITH FAECAL INCONTINENCE

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SUMMARY

Objective: *To evaluate the effectiveness of seconder anal sphincter repair in patients with faecal incontinence.*
Design: *Retrospective study*
Setting: *Gaziantep Üniversity, Medical School, Department of Obstetrics and Gynecology*
Patients: *Patients with fecal incontinence.*
Interventions: *Seconder end-to-end repair of anal sphincter.*
Main outcome measures: *Postoperative flatus and faecal incontinence*
Results: *Twelve (75%) women had improvement for faecal incontinence in which 4 (25%) women had flatus incontinence.*
Conclusions: *The results of seconder anal sphincter repair in Gaziantep University, Medical School, Department of Obstetrics and Gynecology was observed in consistent with literature. Further randomised controlled trials to compare the effectiveness of different techniques including overlap repair, end-to-end repair in reducing anal incontinence are needed.*

Key words: *faecal incontinence, seconder anal sphincter repair*
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FEKAL İNKONTİNANS SEBEBİYLE SEKONDER ANAL SFİNKTER ONARIMI UYGULANAN HASTALARIN ANALİZİ

ÖZET

Objectif: *2009-2010 yıllarında fekal inkontinans sebebiyle sekonder anal sfinkter onarımı uygulanan hastaların sonuçlarının değerlendirilmesi.*
Planlama: *Retrospektif*
Ortam: *Gaziantep Üniversitesi Tıp Fakültesi, Kadın Hastalıkları ve Doğum AD*
Hastalar: *Fekal inkontinans şikayeti bulunan hastalar*
Girişim: *Uçuca anastamoz yöntemi ile sekonder anal sfinkter onarımı*
Değerlendirme parametreleri: *Postoperatif fekal ve gaz inkontinansı*
Sonuç: *Hastaların % 75 inde fekal inkontinansta düzelme izlenirken, bu hastaların %25'inde gaz inkontinansının devam ettiği saptanmıştır.*
Yorum: *Verilerimiz literatürle uyumlu olarak değerlendirilmiştir. Literatürde sekonder anal sfikter onarımı için uçuca anastamoz ve üstüste sfinkteroplasti olmak üzere iki metod tanımlanmıştır. Bu iki yöntemi karşılatıran randomize, kontrollü çalışmalara ihtiyaç vardır.*

Anahtar kelimeler: *fekal inkontinans, sekonder anal sfinkter onarımı*
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INTRODUCTION

Fetal incontinence, which is defined as involuntary loss of solid or liquid gaita, is a pathology that considerably reduces the quality of life of the patient [1]. The prevalence of fetal incontinence may vary between 2-15% in adult women[2]. Although colorectal diseases such as rectal prolapsus and irritable bowel syndrome; congenital anomalies such as spina bifida and meningomyelocele; and neurological conditions such as dementia and pudental nervous damage may cause fecal incontinence, the most commonly encountered reason of this pathology is obstetric anal sphincter injuries[3]. Anal sphincter damage may occur in one of each 5 women that experienced vaginal delivery and approximately 1/3 of these women may have the findings of anal incontinence with the symptoms that may appear many years after the delivery [4]. The largest risk group included the women with obstetric anal sphincter damage in whom grade 3-4 vaginal laceration was observed. Although the primary repair of the grade 3-4 vaginal lacerations is performed during the delivery, the incidence of anal incontinence in these patients is above 50%[5]. These patients undergo secondary anal sphincter repair (SASO) performed by obstetricians or coloproctologists. For SASO, in the literature, there is no a consensus about the operational technique, the suture material used, the necessity of colostomy or antibiotic prophylaxis and the method of delivery to be selected following the repair[6]. In this study, we aimed to evaluate and compare with the literature the results of the patients who underwent SASO due to fetal incontinence in our clinic between 2009 and 2010.

MATERIAL AND METHODS

We retrospectively evaluated 17 patients who underwent SASO operation due to fecal incontinence in the Department of Gynecologic and Obstetric Diseases of Gaziantep University Medical Faculty between 2009 and 2010. Sixteen patients were contacted via telephone and they were questioned about the improvement of obstetric histories and complaints on the questionnaire form.

All the patients who underwent SASO were given bowel preparation procedure using preoperative 90 ml sodium phosphate and 3x500 mg metronidasol and were advised to use laxatives for 10 days after the operation, to prevent the damage of sutures due to post-operative forced defecation and given the potential need for colostomy. SASO was realized using end-to-end anastomosis method. None of the patients underwent colostomy. All patients received double antibiotic prophylaxis using intraoperative i.v. 2x500 mg cefuroxime and 2x500 mg metranidasol. Antibiotic prophylaxis was performed via oral route using 2x500 mg cefuroxime and 2x500 mg metranidasol for 7 days after the operation.

Operational technique: Following the activation of the scar tissue in the rectovaginal junction via sharp dissection, vaginal and rectal mucosas were liberalized. In both sides, anal sphincter lodge was dissected using the tip of Metzenbaum scissors. Pearl-colored strong anal sphincter bands were captured by directing Alice clamps trough these openings. Rectal mucosa damage, if any, was repaired with continuous suture using 2/0 lactomer (Polysorb, USA) and, thereafter, strong pearl-colored anal sphincter bands that have been captured at both ends were joined by putting end-to-end and these bands were connected by placing 2-3 quite unstrained sutures with 0 atraumatic lactomer (Polysorb, USA). Following the closure of the vaginal mucosa, the repair of the perineum has been completed.

RESULTS

For the patients who underwent secondary end-to-end anastomosis due to fecal incontinence in the Department of Gynecological Diseases and Obstetrics of Gaziantep University between 2009 and 2010, mean (min-max) age was 24.8 (21-40) and gravid was 2.4 (1-3). Mean (min-max) time passed after the operation was found to be 13.4 (4-25) months). It was learned that the complaints of all the patients had begun after the first delivery, but multiparous patients experienced an exacerbation of the complaints following other deliveries. Mean (min-max) time passed from the last delivery to SASO was 13.8 (6-120) months. Three patients showed the improvement of fecal incontinence despite the continuing incontinence, nine patients showed a full recovery of the complaints and 4 patients showed the remaining fecal incontinence (Table I). In this case, it was detected that 75% of the patients had improved fecal incontinence and 25% of the patients who showed the improvement of symptoms had ongoing gas incontinence. Despite the inadequate number of patients, no significant correlation was observed between the duration of fecal incontinence and post-operative clinical recovery.

DISCUSSION

Anal incontinence is a social and hygienic problem that manifests with fecal and gas incontinence[7]. This problem, which physically and psychologically lowers the quality of life of the women, cannot be told even to the doctors because of the shame experienced by the patients. In a study conducted, it was determined that 1/3 of the patients with fecal incontinence had not previously discussed this issue with a doctor[8]. Therefore, it is difficult to evaluate the incidence of fecal incontinence, its correlation with vaginal delivery and the results of the therapies given. It is known that the formation of anal incontinence was markedly contributed by obstetric anal sphincter damage caused by vaginal delivery[9]. Obstetric anal sphincter damage may be detected either by being clearly observed during the delivery or in an occult manner during the ultrasonographic examination performed after the delivery. Although the literature shows an incidence of 0.5-3% for the observation of clear anal sphincter damage observed during the vaginal delivery[10,11], it was highlighted that occult anal sphincter damage was observed in 35% of the primiparous women and that this was significantly associated with anal incontinence [12,13]. In the presence of obstetric anal sphincter damage, it is inevitable to see anal incontinence in the cases in which this damage cannot be detected. Unfortunately, in the cases in which sphincter damage was detected, the likelihood of anal incontinence following primary repair was stated to be 50% and above[5,14]. These patients with undetectable occult obstetric anal sphincter damage or with the findings of anal incontinence despite primary repair undergo secondary repair in the late stage.

For SASO, two methods were defined: end-to-end anastomosis and overlapping sphincteroplasty (Figure 1). In the literature, there are limited number of prospective randomized studies that compared end-to-end anastomosis method performed rather by obstetricians and overlapping sphincteroplasty method commonly performed by coloproctologists[4,5]. Based on Cochrane database, these two methods were not different in terms of the success in the recovery of fecal incontinence[15]. In this issue, the randomized study conducted by Tjandra et al. did not find a difference of success between two groups and the investigators highlighted that, among these two methods with the same success ratios, technically easier end-to-end anastomosis method could reduce the morbidity [16]. We performed SASO using end-to-end anastomosis technique to all the patients who were presented to our clinic with the complaint of fecal incontinence.

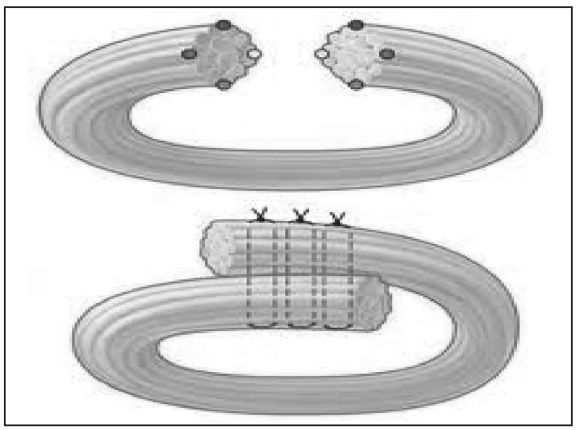

Figure I: *Two types of anal sphincter repair.*

Table I: *The results of the patients who underwent secondary anal sphincter repair.*

Patient No	Age	Parity	Time passed after the operation (months)	Recovery	Gaita incontinence	Gas incontinence
1	22	3	13	+	_	+
2	26	3	10	_	+	+
3	40	3	14	+	_	_
4	23	2	4	+	_	_
5	21	2	11	+	_	_
6	24	3	18	_	+	+
7	22	2	9	+	_	_
8	25	3	16	+	_	+
9	24	2	8	_	+	+
10	23	1	22	+	_	_
11	28	3	13	+	_	_
12	24	2	11	_	+	+
13	26	2	25	+	_	+
14	23	2	14	+	_	_
15	21	2	16	+	_	_
16	25	3	10	+	_	_
Mean	24.8	2.4	13.4	12	4	7

Data presented in the literature mostly contain the results of overlapping sphincteroplasty method administered by coloproctologists in the patients who underwent SASO in the late stage due to fecal incontinence. Accordingly, although the success rates varied between 50% and 78%, the mean success rate was reported to be 60%[4,17-20]. In our clinic, we administered end-to-end sphincteroplasty to our patients who had fecal incontinence at a late stage, such as mean 13.8 months following the last delivery, and we obtained an improvement by 75% in the complaints. We considered our results as consistent with the literature. Although, in this analysis, we could not determine the rate of impairment in the scores for anal incontinence over time after the operation cited in the literature, the fact that we detected the success rate of 75% averagely 13.4 months after the operation suggested that our operational technique was efficient.

Consequently, contrarily to the general view, SASO that is administered using the method of overlapping sphincteroplasty by coloproctologists at a late stage could yield successful results when administered by the gynecologists using end-to-end anastomosis method with a lower morbidity. Randomized, controlled studies are needed to compare two methods and to reveal the prognostic factors that determine the success in the fecal incontinence surgery.

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