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ARAŞTIRMA / RESEARCH

Effect of laparoscopic hysterectomy on sexual function and quality of life: 12-month follow-up results

Laparoskopik histerektominin cinsel işlevler ve yaşam kalitesi üzerine etkisi: 12 aylık izlem sonuçları

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Abstract

Purpose: The purpose of this study is to investigate the effect of laparoscopic hysterectomy for benign reasons on the quality of life and sexual function of the patients with 12-month follow-up results.

Materials and Methods: This prospective cohort study included 28 patients who had a laparoscopic hysterectomy. The participants` quality of life and sexual function level was measured with the Female Sexual Function Index (FSFI) and Short Form 36 Quality of Life Scale (SF-36) before and the first year after the operation.

Results: There were no significant differences on the participants` sexual function scores between preoperation, and the first year after the operation. Although there was an improvement in all of the sub-domain scores, only sexual desire scores decreased after the operations, but these results were not statistically significant. However, quality of life scores, in all sub-domains, significantly increased after the surgery except the vitality. The vitality scores of the participants decreased.

Conclusion: There is no effect of laparoscopic hysterectomy on sexual functioning, and there is a positive effect on the quality of life in the 12-month follow-up.

Key words: total laparoscopic hysterectomy, hysterectomy, sexual function, quality of life

Öz

Amaç: Bu çalışmanın amacı, benign nedenlerle yapılan laparoskopik histerektomi ameliyatının, yaşam kalitesi ve cinsel işlevler üzerine etkisini 12 ay sonuçlar ile incelemektir.

Gereç ve Yöntem: Bu prospektif kesitsel çalışma 28 laparoskopik histerektomi olmuş hastadan oluşmaktadır. Katılımcıların yaşam kalitesi ve cinsel işlevleri operasyon öncesi ve operasyondan bir yıl sonra, Kadın Cinsel Fonksiyon Ölçeği (FSFI), Yaşam Kalitesi Ölçeği Kısa Form 36 (SF-36) anketleri ile ölçülmüştür.

Bulgular: Katılımcıların, operasyon öncesi ve birinci yıl cinsel işlev skorlarında istatistiksel olarak anlamlı bir fark saptanmadı. Tüm alt grup skorlarda artış mevcutken; 'arzu' alt grubunda azalma saptanmış olup bu sonuçlar istatistiksel olarak anlamlı değildi. Yaşam kalitesinin tüm alt gruplarında 'enerji' dışında istatistiksel olarak anlamlı artış mevcuttu. 'Enerji' alt grupta ise azalma saptandı.

Sonuç: Laparoskopik histerektominin 12 aylık takiplerde seksüel fonksiyonlar üzerine bir etkisi bulunmamışken, yaşam kalitesi üzerine pozitif etkisi olduğu saptanmıştır.

Anahtar kelimeler: Total laparoskopik histerektomi, histerektomi, cinsel işlev, yaşam kalitesi

INTRODUCTION

Hysterectomy is the surgical removal of the uterus, and it is one of the most common gynecologic operations performed worldwide for benign disorders[1-3]. In the present time, there are several ways to perform hysterectomy including abdominally, laparoscopy, vaginally, robotic surgery or using a combination of both of these techniques[3]. The first laparoscopic hysterectomy were performed in 1989 by Harry Reich[4].

Given the 2009 report, 20 percent of hysterectomies performed by benign causes in the USA are preferred laparoscopically[5]. Laparoscopic

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hysterectomy offered some statistically significant advantages over abdominal hysterectomy; among these were a quicker return to normal activities, less postoperative pain, earlier discharge from hospital and improved quality of life after surgery[3,6]. The advantages of laparoscopic hysterectomy have also been demonstrated regarding sexual function[7].

The not only technique of hysterectomy but also the indications of surgery may be changed in the sexual functions and quality of life of patients after hysterectomy. Because abnormal uterine bleeding, endometriosis, and adnexal or uterine pathologies can lead to sexual problems, and pain reduce the quality of life[8].

The purpose of this study is to investigate the effect of laparoscopic hysterectomy, on quality of life and sexual function of women who needed a laparoscopic hysterectomy for benign reasons with a 12-month follow-up, independently of other hysterectomy techniques.

MATERIALS AND METHODS

The present study was conducted in the gynecologic department of a private hospital, from January 2017 to January 2018. For this prospective descriptive study, a total of 28 patients with benign indications for TLH were retrieved using convenience sampling. The local ethical committee of Duzce University approved the study protocol (2018-132). Informed consent was obtained from all participants, and the study was in agreement with the Declaration of Helsinki for Medical Research Involving Human Subjects.Patients who visited the clinic were informed about the study and were asked if they would be willing to participate in the study. All of the patients were routinely examined physical and vaginal; transvaginal ultrasonography and pap smear tests and also endometrial sampling were done before surgery.

The following inclusion criteria were applied: Hysterectomy indicated for a benign gynecological condition for examples; medical treatment-resistant menometrorrhagia, myoma uteri, endometrial hyperplasia. Pathology test results were benign.

Participants with chronic disease history such as liver and kidney problems, who had pelvic correction surgery, with concurrent unilateral or bilateral adnexectomy, pelvic cancer or radiotherapy, a perioperative complication with the need for intraoperative conversion to laparotomy, with sexual dysfunction (Female Sexual Dysfunction was defined as a total score of FSFI 26 or less) were removed from the study[9].

All patients were admitted to the hospital one day before surgery. In a quiet room, demographic data were recorded, and validated Turkish versions of the Female Sexual Function Index (FSFI)[10]; and Short Form 36 Quality of Life Scale (SF-36) were administered under the supervision of a physician[11].

TLH (total laparoscopic hysterectomy), where the entire operation, including suturing of the vaginal vault, is performed laparoscopically, and there is no vaginal component; were administered to all patients. All operations were performed by the same experienced surgeon in laparoscopy.

The clinical data of the participants including; age, gravity, parity, preoperative and postoperative hemoglobin values, indications of hysterectomy, blood transfusion needs, operation time, complications and time staying in the hospital were evaluated. The control examinations of the patients were performed; the FSFI and Short Form quality of life scale (SF-36) forms were filled at the 12th months of the operation. Primary outcomes of the study were sexual function, quality of life whereas secondary outcomes; were evaluation of operation time, blood loss, complication rates, length of hospital stay.

Scales

Female Sexual Function Index (FSFI)

The FSFI is a brief instrument consisting of 19 questions with five-point response options from 1 to 5, for assessment of sexual function. Questions are scored for the domains of libido, arousal, lubrication, orgasm, satisfaction, and pain (a maximum possible score of 36)[12].

Short Form 36 Quality of Life Scale (SF-36)

Quality of life of the participants was measured by short from the quality of life scale. The scales is consists of 36 questions measuring eight domains of quality of life: physical functioning, social functioning, role limitations related to physical problems, role limitations related to emotional problems, mental health, vitality, bodily pain and general health perception. Participants can receive

scores ranging from 0 (indicating the worse health status) to 100 (indicating the best health status) for each domain.

Statistical analysis

The data were analyzed using SPSS version 11. Data are reported as means ± standard deviations. The Kolmogorov-Smirnov test was performed to assess the distribution of data. Comparisons of preoperative and postoperative scores were performed using the paired-samples t-test and Wilcoxon test. A p value of less than 0.05 was considered statistically significant.

RESULTS

The characteristics of the participants are shown in table 1. The mean difference in hemoglobin values between pre-operation and post-operation was 2.1±1.6 mg/dl (mean±SD). The participants had a mean operation time of 128.9±38.2 minutes. The participants stayed 3.1±1.6 (mean±SD) days in the hospital. Mean body mass index (BMI) of the participants was 26.1±4.5 kg/m2 (mean±SD) (Table. 1). Due to intraoperative blood loss, two patients had one unit; and four patients had two units of blood transfusion.

Table 1. Demographic and clinical variables

	Mean ± SD	min-max
Age (y)	45.1±8,4	39-54
Gravity	3.2±1.8	0-8
Parity	2.1 ± 1.6	1-5
Operation duration (min)	128.9±38.2	60-210
Duration of stay in hospital (d)	3.1±1.6	2-6
Preoperative postoperative hemoglobin difference (mg/dl)	2.0±1.4	0.3-3.9

y; years, min; minutes, d; day, min-max; minimum-maximum

This study investigated sexual function scores of participants who had a laparoscopic hysterectomy preoperative, and one year after the surgery. The results reported that sexual function scores of the participants increased by 6% one year after the operation. Although there was an improvement in all of the domain scores, only sexual desire scores of the participants decreased after the operations, but these results were not statistically significant (p≥0.05). The details subdomain scores are shown in Table 3 and figure 1.

There were significant differences between the quality of life domain scores of the participants before and after the operation (p<0.05). The results indicated the quality of life of the participants increased in all of the domains after the operation except decreasing the vitality scores. The subdomain scores are shown in Table 3 and Figure 2.

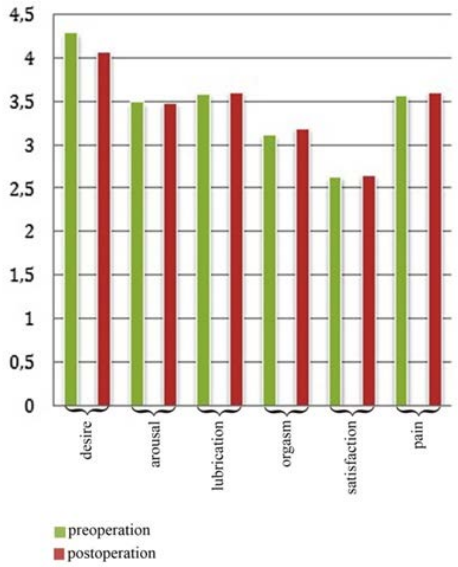

Figure 1. FSFI Scores of the participants, preoperative and 12-month follow-up results

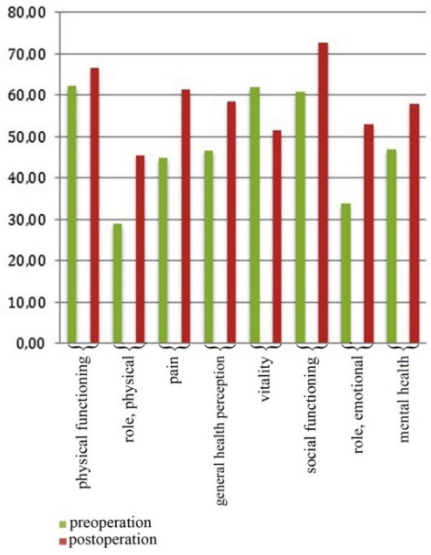

Figure 2. Quality of life scores of the participants, preoperative and 12-month follow-up results

Table 2. Hysterectomy indications and complications

	n	%
Hysterectomy Indications		
Myoma uteri	13	46.3
Treatment resistant menometroragia	11	39.2
Endometrial hyperplasia	4	14
Applied Operations and Complications		
TLH	28	100
Total complications	2	7
Serozal colon injury	1	3.5
Mild ileus	1	3.5

Table 3. The comparison of pre-operative and postoperative 1. year FSFI total scores and subdomains and preoperative and postoperative 1. year SF(36) subdomain scores

	Preoperative	Postoperative 1.Year	p value
FSFI total	27.2±1.8	28.9±1.2	NS*
desire	4.2 ± 1.6	4.0 ± 1.0	NS*
arousal	3.4 ± 1.4	3.4 ± 1.2	NS*
lubrication	3.5 ± 1.4	3.6 ± 1.2	NS*
orgasm	3.1 ± 1.3	3.1 ± 1.1	NS*
satisfaction	2.6 ± 1.1	2.6 ± 1.2	NS*
pain	3.5 ± 1.1	3.6 ± 1.7	NS*
SF-36			
physical functioning	62.1± 22.6	66.7± 19.4	S**
social functioning	60.8±13.3	72.6± 14.1	S**
role limitations related to physical problems	28.8± 7.5	45.5± 8.1	S**
role limitations related to emotional problems	33.9± 10.6	52.9±17.2	S**
mental health	46.9±11.8	57.9±19.1	S**
vitality	62.1±13.3	51.6±12.6	S**
bodily pain	44.9± 12.2	61.3± 20.8	S**
general health perception	46.7±13.1	58.3±10.7	S**

S: significant, NS: non-significant The significance level is p <0.05. *p Value is ≥0.05 **p Value is <0.05.

DISCUSSION

In the present study, it was planned to minimize the variables by applying a single technique; to compare the preoperative and postoperative first-year' scores of the patients. The cervix was removed totally, the adnexes were preserved, the postmenopausal patients were excluded from the study; a homogeneous and limited patient population was attempted to be established. Long-term results were performed at 12 months. These are the strengths of our study. The small sample size of the study group and usage self-report measurement tools to evaluate primary outcomes are the limitations of the study.

It was known that sexual function is a major cause of women's concern for scheduled hysterectomy2. Having uterus is one of the strong predictors of self-image as it is strongly related to femininity. It is highly likely that every woman would be worried about how hysterectomy would affect her sexual life including functioning and sexual desire[2,13]. The participants may not objectively state their concerns about sexual functioning after the operation, because of the sexual life is a taboo in Turkey and not easily discussed[13].

There are studies in the literature on the effects of hysterectomy techniques on sexual functions and quality of life[3,14-16]. The effects of hysterectomy on women's sexuality are controversial. Most reports suggested sexual function and quality of life improved or were unchanged following hysterectomy[8,14-16].

According to a study; hysterectomy may significantly improve sexuality only in patients with impeded preoperative sexual function[14], to exclude this situation, patients with sexual dysfunction were excluded from our study.

It was shown that psychological well-being and sexuality after hysterectomy are not influenced by surgical technique[16]. Sexual pleasure improves after vaginal hysterectomy, subtotal abdominal hysterectomy, and total abdominal hysterectomy[17]. The persistence and development of bothersome problems during sexual activity were similar for all three techniques[17].

Contrary to the above view, there is also the opinion that the technique and the indication affect the results[3,6,7,18,19]. Psychological factors such as afraid of to get pregnant, indications of operation; like pain, bleeding, cancer fear could contribute to a decrease in sexual satisfaction[8] and the disappearance of these complaints is usual to increase the quality of life and sexual satisfaction.

It was shown that there was a significant positive effect on postoperative sexual function[14]. In a large-scale study of the effects of hysterectomy techniques on Hypoactive sexual desire disorder (HSDD), no differences were detected about sexual fantasies and desire for sexual activities, irrespective of the surgical technique used[15].

In the present study, the increase in sexual functions and the fact that it is not statistically significant is also consistent with the literature. Sexual desire scores were decreased, but no significant observed like the above study[15]. Contrary to the idea that the hysterectomy technique does not affect the results; laparoscopic hysterectomy has been shown to have superior the other hysterectomy techniques regarding sexual functions and quality of life[3,6,7,18,19].

In the present study, we identified the technique only as TLH and aimed to examine the effects of this operation with one-year follow-up, and it was found that the quality of life of the patients increased after the hysterectomy. This finding is coherent with previous researchs indicating that there is an improvement in the quality of life of patients who undergone hysterectomy[14,19,20]. According to a review about the comparison of laparoscopic and abdominal hysterectomy regarding quality of life; the data available show that laparoscopic hysterectomy performs equally or better in terms of postoperative health and quality of life in postoperative period[21].

It is surprising that, unlike the literature, there is a decrease in postoperative vitality scores. This result may be due to the small sample sizes. Further and long-term follow-up studies are needed with larger series to investigate longer-term effects of laparoscopic hysterectomy.

As a conclusion there is no effect of laparoscopic hysterectomy on sexual function, and there is a positive effect on the quality of life in 12-month follow-up.

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