

Postoperative Patient Satisfaction After Laparoscopic Supracervical Hysterectomy

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ABSTRACT

Background and Objectives: The aim of this study was to evaluate postoperative patient satisfaction in women after laparoscopic supracervical hysterectomy (LASH).

Methods: A retrospective study by a mailed questionnaire among 2334 women who underwent hysterectomy via LASH at the MIC-Klinik, Berlin, between 1998 and 2004 was conducted. Indications for LASH were uterus myomatousus, adenomyosis uteri, disorders of bleeding, and genital descensus. The LASH operation technique was standardized and remained consistent throughout the observation period. Pearson's test for metric variables, Spearman's rank correlation test for ordinal data, Mann-Whitney *U* test, and Kruskal-Wallis test were used.

Results: Of the 2334 questionnaires mailed, 1553 were returned and 1431 (61.3%) of those could be analyzed. Almost 94% (93.9%) of the women were highly satisfied with the outcome, 5.6% reported medium satisfaction, and 0.5% were not satisfied. There was no significant difference in patient satisfaction with regard to the different indication for LASH.

Conclusion: This study demonstrates high postoperative patient satisfaction after LASH. The rate of highly satisfied women might be increased by carefully choosing the right indications for LASH and improving operation techniques. This is important for widening acceptance of this innovative new operation standard.

Key Words: LASH, Hysterectomy, Satisfaction.

INTRODUCTION

Hysterectomy is one of the most commonly performed surgical procedures in gynecology. Supracervical hysterectomy has been rediscovered as a minimally invasive alternative to all methods of total hysterectomy. In the 1940s, supracervical hysterectomy, which was then performed by laparotomy, was largely replaced by total hysterectomy. This was the result of advances in medical technology and the emerging use of antibiotics, and to prevent the occurrence of cervical stump carcinoma and the development of prolapse as adverse events after supracervical hysterectomy. The major changes in technique introduced were extrafascial removal of the entire uterus with anchoring of the anterior and posterior vaginal cuff at the corners to the uterosacral ligaments.¹ In this prelaparoscopic era, total hysterectomy dominated with its 2 approaches: vaginal (VH) and abdominal (AH). Reich² first performed laparoscopic hysterectomy in 1989. During the past 2 decades, the laparoscopic approach to hysterectomy has evolved. Currently, 3 types of laparoscopic hysterectomy (LH) are practiced: laparoscopically assisted vaginal hysterectomy (LAVH), where VH is preceded by laparoscopy; total LH (TLH), where the vaginal vault is sutured laparoscopically; and laparoscopic supracervical hysterectomy (LASH).

Advantages of LASH are less morbidity, faster convalescence, shorter hospital stay, and subsequent reduced economic burden. Further, supracervical hysterectomy preserves the anatomy of the cervix and surrounding structures. Numerous authors note that the cervix should not be removed without indication because this might result in genital descensus, bladder and bowel alterations, or sexual disorders.³⁻⁶

The leading argument against supracervical hysterectomy is the possibility of cervical stump carcinoma development. Although the risk of cervical stump carcinoma is low (0.11 to 1.9%),^{7,8} postoperative preventive cancer screening is obligatory, and women with conspicuous Papanicolaou test results should be excluded from LASH.

Beyond medical and economical reasons, patient satisfaction plays an important role with regard to the acceptance and widening of a new operation technique. The aim of

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this study was to evaluate postoperative patient satisfaction in women after LASH. To our knowledge, this issue has been evaluated only in small cohorts.

MATERIALS AND METHODS

Patient satisfaction of women who underwent hysterectomy via LASH at the MIC-Klinik, Berlin, between 1998 and 2004 was evaluated in a retrospective study by mailed questionnaire. Indications for LASH were uterus myomatous, adenomyosis uteri, disorders of bleeding, and genital descensus. In the case of genital descensus, LASH was performed in combination with cervicosacropey or with suspension with modified McCall suture. Benignity was clarified by colposcopy and cytology. No woman had endometriosis. In the case of abnormal bleeding and suspect sonographic findings, dilation and curettage was performed. Preoperative counseling emphasized the need for continued cervical screening and a possibility of cyclical bleeding in the future.

The LASH operation technique standardized and remained consistent throughout the observation period.⁹ Patients are placed in the dorsal lithotomy position with the bladder drained before operation. A uterine manipulator is not used. With sufficient pulling of the forceps to the other side, it is not necessary for safety reasons to use a manipulator. With this method, our intraoperative complication rate remains as low as with use of a manipulator. Pneumoperitoneum is established via the Veress needle through the umbilicus, and a 5-mm port is inserted followed by two 5-mm lower quadrant ports, lateral to the inferior epigastric arteries. The round ligaments and the uterine tubes are coagulated and transected bilaterally. After creation of a bladder flap, the parametria are dissected and the uterine arteries secured with a bipolar device. The uterus is amputated using a monopolar hook. Hemostasis is performed by bipolar coagulation of the cervical stump, including the epithelium lining the endocervical canal. The cervical stump is covered with peritoneum using a purse-string suture. Uterine morcellation is

carried out with a 10-, 15-, or 20-mm electric morcellator through the dilated left lower quadrant port.

During the observation period from June 1998 to October 2004, 2334 LASH operations were performed at MIC-Klinik, Berlin. In the same period, 14 AHs, 1 TLH, and 77 LAVHs were performed. A questionnaire was sent at a minimum of 6 months after the operation to all 2334 women.

We used Pearson’s test for metric variables, Spearman’s rank correlation test for ordinal data, as well as the Mann-Whitney *U* test and Kruskal-Wallis test. A *P* value < .05 was considered statistically significant. Data were analyzed using SPSS version 13.0 (SPSS Inc./IBM, Armonk, NY).

RESULTS

Of all 2334 questionnaires sent out, 1553 were returned and 1431 (61.3%) of those could be analyzed. As shown in **Table 1**, 1344 patients (93.9%) were highly satisfied with their outcome after LASH. Eighty patients (5.6%) reported medium satisfaction and 7 patients (0.5%) were not satisfied. There was no significant difference in patient satisfaction with regard to the different indication for LASH. When the period between the date of LASH and the date of questioning was classified into 6 subgroups (5 to 6 years, 4 to 5 years, 3 to 4 years, 2 to 3 years, 1 to 2 years, and 6 to 12 months), no significant difference in patient satisfaction could be found within the different subgroups (**Table 2**).

Patients were asked about the occurrence of postoperative vaginal bleeding. There was no significant difference in the percentages of postoperative bleeding with regard to the indication for LASH (**Table 3**). As shown in **Table 4**, 288 of the 1344 patients (21.4%) who were highly satisfied with LASH had postoperative vaginal bleeding. Of the 80 women reporting medium satisfaction, 41 (51.3%) had vaginal bleeding, whereas in the group of 7 poorly satisfied women, 5 (71.4%) had postoperative bleeding.

Table 1.
Postoperative Patient Satisfaction After LASH

Patient Satisfaction	Uterus Myomatous	Adenomyosis Uteri	Bleeding Disorders	Genital Descensus	All Indications
High, n (%)	1116 (94.6)	72 (90.0)	149 (92.5)	7 (70.0)	1344 (93.9)
Medium, n (%)	58 (4.9)	8 (10.0)	12 (7.5)	2 (20.0)	80 (5.6)
Poor, n (%)	6 (0.5)	0 (0.0)	0 (0.0)	1 (10.0)	7 (0.5)

Table 2.
Postoperative Patient Satisfaction at Different Time Points of Follow-up After LASH

Patient Satisfaction	6 mo to 1 y	1 to 2 y	2 to 3 y	3 to 4 y	4 to 5 y	5 to 6 y
High, n (%)	362 (92.8)	453 (93.4)	212 (94.6)	191 (95.5)	97 (97.0)	29 (90.6)
Medium, n (%)	26 (6.7)	29 (6.0)	12 (5.4)	7 (3.5)	3 (3.0)	3 (9.4)
Poor, n (%)	2 (0.5)	3 (0.6)	0 (0.0)	2 (1.0)	0 (0.0)	0 (0.0)

Table 3.
Postoperative Bleeding After LASH

Patient Satisfaction	Postoperative Bleeding	
	No	Yes
Uterus myomatosus, n (%)	901 (76.4)	279 (23.6)
Adenomyosis uteri, n (%)	61 (76.2)	19 (23.8)
Bleeding disorders, n (%)	126 (78.3)	35 (21.7)
Genital descensus, n (%)	9 (90.0)	1 (10.0)
All indications, n (%)	1097 (76.7)	334 (23.3)

Table 4.
Postoperative Bleeding and Patient Satisfaction

Patient Satisfaction	Postoperative Bleeding	
	No	Yes
High, n (%)	1056 (78.6)	288 (21.4)
Medium, n (%)	39 (48.8)	41 (51.2)
Poor, n (%)	2 (28.6)	5 (71.4)

A significant correlation between patient satisfaction and postoperative vaginal bleeding could be observed ($P < .05$).

Another question evaluated whether postoperative vaginal bleeding had a negative influence on quality of life. Differences in patient satisfaction between women having answered this question with “yes” or with “no” are highly significant ($P < .0004$). **Table 5** shows the influence of postoperative vaginal bleeding on quality of life with regard to the indication for LASH. Of the 286 women with postoperative vaginal bleeding when LASH was indicated because of uterus myomatosus, 59 patients (20.6%) claimed that the bleeding had a negative influence on their quality of life. This was also reported by 7 of the 15 women with adenomyosis uteri (46.7%). When LASH was indicated because of bleeding disorders, 33 women still had postoperative bleeding. Here, the bleeding negatively

Table 5.
Influence of Postoperative Bleeding on Quality of Life

Indication for LASH	Negative Influence of Postoperative Bleeding on Quality of Life	
	No	Yes
Uterus myomatosus, n (%)	227 (79.4)	59 (20.6)
Adenomyosis uteri, n (%)	8 (53.3)	7 (46.7)
Bleeding disorders, n (%)	18 (54.5)	15 (45.5)

influenced quality of life in 15 women (45.5%). The percentages of women in whom postoperative bleeding negatively influenced quality of life significantly differed with regard to the respective indication for LASH ($P < .0004$).

DISCUSSION

This retrospective analysis of patient satisfaction in women after LASH shows that most patients are highly satisfied with their postoperative outcome, which is in line with smaller studies.^{10–12} Postoperative satisfaction was constantly high after the different indications for LASH and did not depend on the duration of the observation period and the date of LASH, respectively. The latter fact might be of particular interest for gynecologists deciding to establish laparoscopic operation techniques in their departments because early LASH operations performed 6 years ago were also considered.

Approximately one-quarter of the women had postoperative bleeding. This is not a result of too-high amputation rates. As the cervical mucus recovers after surgery, it may react to hormonal changes in the area of the ovaries. In the future, we will try to resolve this problem by sufficient duration of coagulation. The rate of postoperative bleeding published is between 1% and 25%, whereby this discrepancy might be explained by different case numbers, operation techniques, or observation periods.^{11,13–16} Patient satisfaction correlated with these postoperative vaginal bleeding occurrences. This was even more pronounced when quality of life

was decreased by postoperative bleeding. With regard to the different indications for LASH, postoperative bleeding was found to have a mostly negative influence on quality of life in women who had LASH for adenomyosis uteri or for preoperative bleeding disorders. This underlines the importance of choosing the right indication for LASH. In particular, women with bleeding disorders or dysmenorrhea should be carefully counseled that postoperative (cyclic) bleeding might persist. An influence of the operation technique on postoperative bleeding was demonstrated by others, and the height of uterus amputation, as well as coagulation of the endocervical canal, is considered to play an important role.^{17,18} Future prospective trials should be conducted to evaluate patient satisfaction with regard to different operation techniques or modifications.

CONCLUSION

This study demonstrates high postoperative patient satisfaction in women after LASH. The rate of highly satisfied women might be increased by carefully choosing the right indications for LASH and improving operation techniques. This is important for widening acceptance of this innovative new operation standard.

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