

# Problems Related to the Cervical Stump at Follow-Up in Laparoscopic Supracervical Hysterectomy

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## ABSTRACT

**Objectives:** To evaluate our experience with laparoscopic supracervical hysterectomy (LASH) and to assess the short- and medium-term outcome.

**Methods:** Retrospective analysis of patient and surgery characteristics from chart review and evaluation of patient satisfaction by a questionnaire.

**Results:** Forty-one patients who underwent LASH were studied with a mean length of follow-up of 27 months. Operative complications consisted of one bladder lesion and one bleeding at the trocar site. Postoperative complications were bladder atony (1), paralytic ileus (1), a pulmonary embolism (1) and vaginal hemorrhage from the colpotomy incision (1). Twenty-five percent of the patients continued to menstruate, and 10% had symptoms of discharge. Overall, 98% of the patients were satisfied with their operation.

**Conclusions:** Although preservation of the cervix with laparoscopic hysterectomy for benign diseases was satisfactory in most of the cases, several women had complications of the remaining cervix. Special attention should be paid to the careful treatment of the cervical stump. Further prospective studies are needed to evaluate the advantages of retaining the cervix at laparoscopic hysterectomy.

**Key Words:** Laparoscopy, Supracervical hysterectomy, Complications, Follow-up.

## INTRODUCTION

The arrival of laparoscopic techniques for hysterectomy renewed the interest in partial hysterectomy. Laparoscopic hysterectomy has some advantages such as shorter hospital stays and quicker postoperative recovery.<sup>1</sup> However, the decision to remove or to retain the cervix is still a matter of controversy. Advocates claim that retention of the cervix has advantages regarding urinary, bowel and sexual function.<sup>2</sup> In our private practice, laparoscopic supracervical hysterectomy (LASH) has been done since 1993. The purpose of this study was to describe our early experience with LASH for uterine non-malignant diseases and to assess short- and medium-term outcome, including the patient's view about the operation.

## MATERIALS AND METHODS

Between January 1993 and April 1996, 41 patients underwent LASH in our clinic. All operations were done by the same gynecologist. All patients had negative preoperative cervical cytologic smears and had no history of cervical intramuscosal neoplasia (CIN). Our approach had been to do LASH in all patients with benign diseases, when vaginal surgery or hormonal treatments were not possible. Different surgical techniques were used in the LASH procedures. The surgical methods used were either bipolar coagulation and scissors or harmonic scissors and coagulation. In one case, we used endoscopic stapling devices. Following amputation of the uterus at the level of the internal ostium of the cervix, the epithelium lining the cervical canal was coagulated.

Patient demographic data, surgery characteristics and complication data were determined by retrospective chart review. Patient satisfaction was evaluated by a questionnaire, which was sent to all patients in 1997. Patients were asked about symptoms of vaginal bleeding, discharge, sexual function and their overall satisfaction with the procedure.

## RESULTS

Forty-one patients underwent LASH, and all procedures were successful. The patients' ages ranged from 32 to 53

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years, with an average age of 45. The uterine weights varied from 63 to 860 grams, with an average weight of 192 grams. The most common preoperative indications for LASH were dysfunctional uterine bleeding, fibroids and endometriosis.

Operative complications included one bladder perforation, which was corrected laparoscopically, and one case of bleeding at the trocar site. Postoperative complications were bladder atony requiring temporary catheterization (1) and paralytic ileus (1). Hospital readmission occurred in two patients: One patient was readmitted at the 11th day because of a pulmonary embolism, and the other required readmission for several hours on the sixth day because of vaginal bleeding from the colpotomy incision. Intercourse was denied. At examination, some bleeding was observed at the stitches of the colpotomy. Ultrasound did not reveal a hematoma. After a vaginal tamponade for a few hours, further recovery was uneventful.

Forty patients completed the questionnaire, giving an overall response rate of 98%. The length of follow-up ranged from 10 to 51 months, with an average length of 27 months. Ten patients (25%) reported occurrence of some periodic vaginal bleeding after their operation. For this, two of them were treated with a vaginal cervical stumpectomy. Four more patients (10%) mentioned complaints of discharge. One patient had a second laparoscopy because of abdominal pain due to foreign-body reaction to endo-GIA staples. At the top of the cervical stump, a cavity had been formed. The two endo-GIA staples that had been used for clipping the adnexae were removed from this cavity, which was excised from the top. Histology showed a foreign body reaction around the metal parts of the staples. The resected top did not show endometrium or endometriosis. Following this procedure, the patient no longer complained of abdominal pain.

Eleven patients reported sexual problems before operation. Six patients had dyspareunia, two had lack of sexual desire due to irregular bleeding, and three mentioned lack of desire without further specification. Ten of the eleven patients reported an improvement of sexual functioning, mostly because of less pain and absence of bleeding. One patient with lack of desire reported a worsening of sexual functioning afterwards. Twenty-nine patients reported no problems before operation and noticed no difference afterwards. Overall, 39 women

were satisfied with their operation, and one patient was not satisfied because of persistent vaginal bleeding without need for further treatment.

## DISCUSSION

When new technology is introduced in a clinic, evaluating the new procedure is important. In our clinic, we performed LASH in all patients with benign diseases, when vaginal surgery or hormonal treatments were not possible—so being a therapeutic alternative to abdominal hysterectomy. Preservation of the cervix implicates the risk of development of a cervical stump carcinoma; however, the availability of accurate screening possibilities for detecting early cervical malignancy lessens the need to remove the cervix at hysterectomy. Furthermore, the prognosis of a carcinoma of the cervical stump was similar to that of cervical cancer in patients with an intact uterus in the study of Kovalic et al. in 1991.<sup>3</sup> In addition, Kilkkku et al.<sup>4-6</sup> showed certain advantages of partial hysterectomy. Their studies showed decreased urinary tract and bowel symptoms and improved sexual function.

In our study, preservation of the cervix seemed to have some disadvantages. Ten percent of our patients had symptoms of discharge, and 25% of our patients experienced some regular vaginal bleeding. Two of them were treated by a vaginal cervical stumpectomy. The other patients accepted the condition, and all except one were satisfied in spite of the light menses. In the literature, the reported rate of bleeding of the retained cervix is 4.8%.<sup>7</sup> Our higher rate might be due to our technique, although we coagulated the endocervical canal. It is described that coring of the cervix to include the anatomical endocervical canal rather than amputation at the uterine isthmus may be better in preventing bleeding.<sup>8</sup> Another explanation for our high rate may be that we detect more cases because our length of follow-up is longer than in most studies. Only 3 out of 10 of our patients with recurrence of vaginal bleeding consulted their gynecologist with this symptom; therefore, we would have missed the other seven cases when only reviewing the patients' charts. Our high rate of bleeding was not a reflection of our learning curve, since these patients were equally spread over the studied period. In preoperative counseling of patients, discussing the disadvantage of possibly recurrent bleeding is important.

In the literature, an acceptable complication rate for

laparoscopic hysterectomy has not yet been established. There are some reports of complications, but comparing them is difficult because many different descriptions are used. Most data on complications come from retrospective studies of surgeons with a particular expertise in laparoscopic surgery, and this may underestimate the problem. A recently published prospective multi-center observational study in the Netherlands provided a complication rate for laparoscopic hysterectomy of 9%.<sup>9</sup> This study included a wide variety of experience in laparoscopic surgery.

Our questionnaire also contained questions about the patient's sexual function and overall satisfaction. Despite the problems discussed, patient satisfaction was high. To interpret these results properly, comparative prospective studies are needed.

## CONCLUSIONS

Although preservation of the cervix at laparoscopic hysterectomy for benign diseases will be satisfactory in most cases, some women have complained of complications related to the remaining cervix when asked in a questionnaire. After amputation of the uterus, special attention should be paid to the careful coring of the endocervical canal. This study underlines also the importance of follow-up on patients who undergo a new surgical technique to detect long-term complications. Further prospective studies with prolonged follow-up are needed to evaluate the risks and benefits of retaining the cervix at laparoscopic hysterectomy.

## References:

1. Donnez J, Smets M, Polet R, et al. LASH: laparoscopic supracervical (subtotal) hysterectomy. *Zentralbl Gynakol.* 1995;117:629-632.
2. Hasson HM. Cervical removal at hysterectomy for benign disease. Risks and benefits. *J Reprod Med Obstet Gynecol.* 1993;38:781-790.
3. Kovalic JJ, Grigsby PW, Perez CA, et al. Cervical stump carcinoma. *Int J Radiation Oncology Biol Phys.* 1991;20:933-938.
4. Kilkku P. Supravaginal uterine amputation versus hysterectomy with reference to subjective bladder symptoms and incontinence. *Acta Obstet Gynecol Scand.* 1985;64:375-379.
5. Kilkku P. Supravaginal uterine amputation versus hysterectomy. Effects on coital frequency and dyspareunia. *Acta Obstet Gynecol Scand.* 1983;62:141-145.
6. Kilkku P, Grönroos M, Hirvonen T, et al. Supravaginal uterine amputation versus hysterectomy. Effects on libido and orgasm. *Acta Obstet Gynecol Scand.* 1983;62:147-152.
7. Harris WJ, Daniell JF. Early complications of laparoscopic hysterectomy. *Obstet Gynecol Surv.* 1996;9:559-567.
8. Schwartz RO. Complications of laparoscopic hysterectomy. *Obstet Gynecol.* 1993;81:1022-1024.
9. Jansen FW, Kapiteyn K, Trimbos-Kemper T, Hermans J, Baptist Trimbos J. Complications of laparoscopy: a prospective multi centre observational study. *Br J Obstet Gynaecol.* 1997;104:595-600.