Vaginal length after a laparoscopic sacropexy

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Abstract

Vaginal shortening after surgical treatment of pelvic organ prolapse is associated with dyspareunia, which negatively affects women’s sexual life as well as their psychosocial well-being. The aim of the study is to determine the vaginal length in women with high-grade pelvic organ prolapse treated with laparoscopic sacropexy. In the prospective study we included 22 women with high-grade prolapse of the uterus or vagina that were treated. They underwent a gynaecological examination with a measurement of the vaginal length, as well as the evaluation of the degree of prolapse prior to the procedure (laparoscopic sacropexy). The second measurement and evaluation of the vaginal length during the follow-up examination between 6 to 12 weeks after surgery was done. The control group included 23 healthy women, without genital prolapse. There was no statistically significant difference in the mean vaginal length before and after surgery in the group of treated women.

Introduction

Pelvic organ prolapse affects about 30% of women of all age groups.1 The prolapse has a significant effect on the patient’s quality of life. The assessment of the quality of life of patients is evaluated with a standardized questionnaire assessing the problems with urinary retention and difficulties passing stools, evaluation of sexual dysfunction and the impact of problems on the patient’s everyday life and psychosocial health.2

There is an estimated risk that 11.1% of women in the USA will have to undergo prolapse or urinary incontinence surgery by the age of 80 years.3 In the USA there is up to 300,000 surgeries each year due to pelvic organ prolapse (22.7/10,000 women) and 13 to 25% of reoperations due to relapses, which is also a major financial problem.4

Laparoscopic and robotic assisted sacropexy are newer procedures, which are technically more demanding and expensive, but on the other hand offer shorter hospitalization and shorter recovery time with the same results as open surgery. Laparoscopic sacropexy with a mesh is carried out in women with a vaginal vault prolapse after a hysterectomy and failed previous surgical procedures. A fixation of the uterus to the sacrum is possible in women who want to keep the uterus.5

Literature data show a good success rate of robotic assisted laparoscopic supracervical hysterectomy and sacropexy; however, additional monitoring of the results and performance evaluation of the new surgical technique for the treatment of an apical prolapse is required due to the small number of treated patients. With the laparoscopic supracervical hysterectomy and sacrocervicalopexy there is a lower risk for perioperative complications and an expected higher satisfaction rate of the patients.6

The surgical treatment of pelvic organ prolapse or vaginal surgery for other reasons may result in shortening of the vagina, which is connected with dyspareunia. Dyspareunia is a sexual dysfunction defined as genital pain occurring before, during and after sexual intercourse, and is a common clinical problem. The cause may be organic, emotional or psychological.7 Dyspareunia is more common after vaginal hysterectomy than abdominal hysterectomy.8 The pain caused by tissue scarring or nerve damage eventually decreases or wears off. The pain usually occurs continuously in cases where the vagina is shortened and there is scar tissue on vaginal vault.9

In 1952, Jewett had already found that the vagina is reduced in approximately 10% of patients after a total abdominal hysterectomy (0.4 to 2.3 cm).10

In a study which included 3247 patients it was found that with a hysterectomy there was a shortening of the vagina for approximately 0.63 cm. After reconstructive surgery of the pelvic floor (bladder suspension, anterior/posterior colporrhaphy, apical prolapse surgery and other procedures), the length of the vagina was shortened for about 0.22 cm. The shortening of the vagina was approximately 0.38 cm in anterior/posterior colporrhaphy. A hysterectomy without an anterior/posterior colporrhaphy was associated with a lesser shortening of the vagina compared with a hysterectomy with an anterior/posterior colporrhaphy. The shortening of the vagina is, besides hysterectomy and other pelvic floor surgery, also influenced by age, menopause and the patient’s constitution (height and weight).11

A study that included 165 patients treated for prolapse or incontinence established that there is a statistically significant difference in vaginal length before (10.8±1.4) and after a reconstructive surgery of the pelvic floor (9.8±1.3 cm); however, the difference was probably not clinically significant, because there was no established link between the women’s symptoms and measurements of the vagina. The mean value of vaginal shortening after surgery was 1.0±1.8 cm.12 Emphasis was placed on the importance of keeping the vaginal length and size of the introitus after surgery on the pelvic floor. It was also found that the sexual function and satisfaction with sex life has improved or was unchanged after prolapse or urinary incontinence surgery. Dyspareunia was most frequently present in patients after posterior colporrhaphy (26%) and after Burch colposuspension with colporrhaphy (38%).12 In a large epidemiological cross-sectional observational study which included 1,004 women, aged 18 to 83 years, who had come on a regular outpatient gynaecological examination, the mean vaginal length was 9.6±1.5.13

Materials and Methods

In the prospective study we included 22 women with high-grade prolapse of the uterus or vagina without urinary inconti-
It is important to maintain the length of the vagina, because increased vaginal stretch- ened due to previous surgeries to TVL=7.0 cm. After a laparoscopic sacrocolpopexy the patient’s TVL was elongated for 2 cm. This outcome may be the result of a method of examination or differences in measurements between doctors. On the other hand, the possible cause for the prolonged vaginal length is the surgical technique in which it is important to maintain the length of the vagina, because increased vaginal stretching and consequential lengthening of the vagina leads to changes in anatomy and postoperative iatrogenic urinary inconti-
nence. After sacrohysteropexies and sacrocervicopexy there were no changes in vaginal length, which is an expected result, since the uterus is fixed to the sacrum without a vaginal interference. There was also no significant difference between vaginal lengths in patients with laparoscopic sacrohysteropexy and the control group of healthy women (P>0.05).

In one patient (4.5%), the sacrohysteropexy was evaluated as unsuccessful after 3 months. The results found in literature point to the fact of a higher percentage of relapses after surgeries other than a complete hysterectomy (23.8%) when compared to those in which the uterus is removed (6.7%).14 When deciding on whether to perform a hysterectomy we always take the patient’s wish into account.

Although a surgical extension of an iatrogenic vaginal shortening (Davydov’s laparoscopic procedure) can be carried out in extreme cases, which improves dyspareunia and thereby the sexual function,14 it is better use the surgical procedure that doesn’t shorten vagina.

Conclusions

We found that there is no vaginal shortening after a laparoscopic sacropexy. The surgical treatment is an ideal choice for younger, sexually active women with a high-grade prolapse. The results are promising, but the final assessment of changes in the vaginal length after a laparoscopic sacral fixation requires further studies on a larger number of surgical patients, and longer follow up.

References