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SHORT COMMUNICATION



Are symptoms after a colorectal segmental resection in deep endometriosis really improved? The point of view of women before and after surgery

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ABSTRACT

Introduction: Bowel endometriosis can cause debilitating symptoms. Surgical colorectal resection is often required for symptomatic relief. Aim of our study was to evaluate quality of life over a one-year follow-up period in patients submitted to a colorectal resection for the treatment of deep endometriosis. Change in intestinal and extra-intestinal symptoms, and reproductive outcome were also evaluated.

Methods: A prospective observational study was conducted on a cohort of 20 women affected by intestinal endometriosis and submitted to a laparoscopic colorectal resection. The subjects completed a questionnaire about quality of life (SF-36), and they scored in a 100-point rank questionnaire gynecological, urinary and gastrointestinal symptoms, pre-operatively and one-year postoperatively.

Results: Significant improvements were observed in all domains of the SF-36 throughout the study period. Dysmenorrhea, dyspareunia and not menstrual pelvic pain showed a significant decrease 1 year after surgery. There was also a decrease in abdominal pain, rectal bleeding and constipation but not of nausea, abdominal pain, defecation pain, tenesmus, diarrhea, mucorrhea. Also some urinary symptoms did not improve.

Conclusions: The radical surgical approach has a positive impact on quality of life, although it does not improve all the symptoms complained before surgery. Clear pre-surgical counseling and careful patient selection is suggested.

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KEYWORDS

Deep endometriosis; colorectal endometriosis; quality of life; colorectal resection; SF-36 health status; pain symptom

Introduction

Endometriosis presents a wide prevalence in premenopausal women (10%) [1]. Deep endometriosis includes rectovaginal lesions as well as infiltrative forms that involve vital structures such as bowel, ureters and bladder. It is estimated that bowel endometriosis affects about 5–12% of those patients. The main locations of bowel endometriosis are the rectum and recto-sigmoid junction reaching up to 93% of all intestinal endometriotic lesions [2]. This peculiar location has a significant impact on quality of life [3], causing not only dysmenorrhea, dyspareunia and nonmenstrual pelvic pain but also painful defecation, rectorrhagia, tenesmus, constipation, diarrhea and mucorrhea and sometimes nausea and vomiting. Medical therapy is the first approach in these cases, although medical treatments have not been standardized, but often tailored on the single patient. Indeed, when clinical

treatment does not control symptoms or when women wishing to conceive complain pain or, finally, when bowel stenosis is present, surgical management is recommended, although specific guidelines on this subject have not been designed [4–8]. Bowel endometriosis surgery varies from a conservative way (shaving) to radical rectal resection depending on disease extension, bowel wall infiltration and surgeon skill. Rectal resection is a challenging surgery often requiring long recovery and not free from complications (5–12.5%), such as intra-abdominal bleeding, recto-vaginal fistulas, leakage of the anastomosis, abscesses, reoperation, ureteral injuries, bladder or rectal dysfunctions [9–10]. Radical surgery can relieve some symptoms and relapse in deep endometriosis [2] but at the same time, functional postoperative complications affecting gastrointestinal and sexual function can arise. Women receive few information about those postoperative disorders that can have a severe impact

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This study evaluated the changes in quality of life (QOL) over a one-year follow-up period in patients submitted to laparoscopic colorectal resection for the treatment of deep endometriosis using both a QOL questionnaire and a VAS-scale of the symptoms. This integrated method more accurately describes that radical surgery can relieve some symptoms and relapse but functional postoperative complications affecting gastrointestinal and sexual function can arise. Therefore, an accurate and clear preoperative information is warranted.

on their quality of life. The aim of our study is to verify whether colorectal resection, in patients with bowel endometriosis, can really improve the quality of life of women and intestinal and extra-intestinal symptoms complained before surgery.

Methods

Between June 2010 and October 2015, 20 women (median age 34, range 26–47) affected by deep intestinal endometriosis with recto-sigmoid or rectal involvement, underwent a laparoscopic colorectal resection at our Institute. All patients were classified as stage IV (American Society of Reproductive Medicine). Surgery was proposed when clinical treatment (estrogen-progestin or gonadotropin-releasing hormone agonist) did not completely control symptoms or when women wishing to conceive complained pain or finally in the presence of bowel stenosis. Deep pelvic endometriosis involvement of the intestinal mucosal or muscular layer was confirmed by preoperative work-up: gynecological examination, trans-vaginal ultrasound, pelvic MRI and rectal ultrasound. The decision to perform a colorectal resection was made intraoperatively after adhesions and endometriosis removal: when shaving and bowel extrication were not feasible, a colorectal resection was performed. A Quality of Life Questionnaire (QOL SF-36) was administered before surgery (QOL0) and 1 year after surgery (QOL12), after signing an informed consent approved by the local Ethic Committee. At the same time intervals, all patients completed a 100-point rank questionnaire (VAS scale) on intestinal and extra intestinal symptoms. All the women completed the study, there were not lost patients at one-year follow-up. Demographic characteristics are summarized in Table 1.

The statistical analysis of the data preintervention (T0) and 12 months postoperatively (T12) were performed through Wilcoxon rank sum test. The statistical program used is SPSS 15.0 for Windows (version 15.0.1). A *p* value inferior than .05 was considered significant.

Results

All the 20 patients affected by bowel endometriosis were operated by the same team: two senior gynecologists and a surgeon skilled in endometriosis. Three of

Table 1. Demographic data of the 20 patients.

Variable	Median (range)
Age (years)	34 (26–47)
Weight (Kg)	60 (47–78)
BMI (Kg/m ²)	23.2 (18.6–26.7)

them were converted to open surgery. Short-term complications were: one anastomotic leak treated with a transient (1 month) colostomy and two laparotomic wound infections. The mean follow-up period was of 52 (16–72) months. Ten patients received a postintervention therapy, with low dosage estrogen-progestin (15–20 micrograms of estradiol for 2 months) or GnRH agonist (triptorelin). Only one recurrence of colorectal endometriosis was clinically found after 12 months, controlled by medical therapy.

Of the 10 women who tried to conceive, two had spontaneous uncomplicated pregnancies, and one required assisted reproduction assistance. Three women experienced miscarriages.

The physical role, emotional role and pain subscales evidenced the most consistent increases between QOL0 and QOL12 (respectively $p = .0001$; $p = .001$; $p = .003$). The physical functioning, general health, vitality, social functioning and mental health domains also showed a significant improvement ($p = .006$, $p = .001$, $p = .001$, $p = .001$, $p = .001$ respectively), throughout the study period (Figure 1). The analysis of the 100-point rank questionnaire on intestinal and extra intestinal symptoms at one year showed a significant decrease in dysmenorrhea ($p = .00001$), dyspareunia ($p = .000001$) nonmenstrual pelvic pain ($p = .001$), rectorrhagia ($p = .02$) and constipation ($p = .04$). Analysis of other intestinal symptoms (nausea, abdominal pain, pain at defecation, tenesmus, diarrhea, mucorrhea) did not demonstrate significant differences between T0 and T12 ($p = .07$, $p = .07$, $p = .21$, $p = .38$, $p = .21$, $p = .15$ respectively). Furthermore, no differences in terms of urinary symptoms (dysuria, urinary pain, hematuria, urgency and urinary incontinence) were found between the two time periods ($p = .70$, $p = .72$, $p = .31$, $p = 1.0$, $p = 1.0$, respectively).

Discussion

In this pilot study, we assessed, in patients with intestinal endometriosis, the impact of colorectal resection

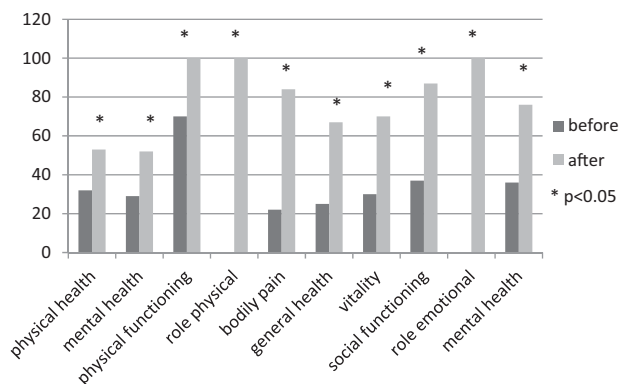


Figure 1. Changes in SF36 subscales after colorectal resection.

on specific intestinal and extraintestinal symptoms and on QOL. We found a significant improvement on all domains of the SF-36 throughout the study period, particularly the physical role, pain role and emotional subscales; dysmenorrhea, dyspareunia and nonmenstrual pelvic pain showed a significant decrease one-year after surgery; indeed some intestinal symptoms (abdominal pain, rectorrhagia and constipation) decreased but others (nausea and vomiting, painful defecation, tenesmus, diarrhea and mucorrhea) persisted; while urinary symptoms complained before surgery (dysuria, urinary pain, hematuria, urgency and urinary incontinence) did not show any improvement after surgery. Several articles investigated the QOL of patients submitted to colorectal resection for endometriosis [6–15]. Dubernard et al using the SF-36 questionnaire [16], found a general improvement of quality of life in a population of women undergoing laparoscopic colorectal resection for endometriosis, but not all patients scored better in all the SF36 components; therefore, they suggested a strict selection of the patients who would really benefit from the intervention based on preoperative cutoffs related to the physical component summary (PCS) and the mental component summary (MCS). In our study, all the enrolled women had lower PCS and MCS scores than the suggested cutoff values.

Few studies evaluated at the same time gynecological, urinary and intestinal symptoms [2,13] and even less described symptoms persistence or worsening. Dubernard [2] observed persistence of tenesmus, rectorrhagia and constipation, confirmed by Ruffo [11] who evidenced no improvement for rectal bleeding and by Bourdel [13] who described the development of 'de novo' constipation and diarrhea. Anastomotic complications and neurological damage after colorectal resection may account for postoperative symptoms occurrence.

The present study was limited by a small sample size and a limited follow-up, nevertheless surgery, medical examinations and questionnaire were always realized by the same multidisciplinary equipe and no patient was lost at follow-up.

In clinical practice preoperative counseling is mandatory, QOL SF-36 can support selection of patients for bowel resection but patients should be well informed about risk and benefit of a radical surgery, and about improvements and worsening that should be expected.

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Disclosure statement

Authors report no conflicts of interest.

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