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Review

Repetitive surgery for recurrent symptomatic endometriosis: What to do?

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ABSTRACT

In spite of the increasing number of operative laparoscopies performed for endometriosis associated pelvic pain, postoperative symptomatic recurrences are very common. Reoperation is often considered the best treatment option, but the extent and duration of the effect of second-line surgery is still unclear. The best available evidence has been reviewed in order to define the results of repetitive conservative surgery, the effects of pelvic denervating procedures and postoperative medical treatments, as well as the long-term outcome of definitive surgery. Because of the paucity of published data, estimating the real risk of symptomatic recurrence and need for reoperation after repetitive conservative surgery for endometriosis is very difficult. Based on the limited information available, the long-term outcome appears suboptimal, with a cumulative probability of pain recurrence between 20% and 40%, and of a further surgical procedure between 15% and 20%. These figures are probably an underestimate related to drawbacks in study design, exclusions of dropouts, and publication bias and should be considered with caution. Systematic complementary performance of denervating procedures in addition to reoperation cannot be recommended, as only a few symptomatic patients complain of predominantly midline, hypogastric pain. The outcome of hysterectomy for endometriosis-associated pain at medium-term follow-up seems quite satisfactory. Nevertheless, about 15% of patients had persistent symptoms, and 3–5% experienced worsening of pain. Concomitant bilateral oophorectomy reduced the risk of reoperation due to recurrent pelvic pain by six times. However, atleast one gonad should be preserved in young women, especially in those with objections to the use of oestrogen–progestogens. Medical treatment appears to have limited and inconsistent effects when used for only a few months after conservative procedures. Data on the benefit of prolonged drug regimens with oral contraceptives or progestogen are lacking. The risk of recurrence of endometriosis during hormone replacement therapy seems marginal if combined preparations or tibolone are used and oestrogen-only treatments are avoided. The opportune surgical solution in women with recurrent symptoms after previous conservative procedures for endometriosis should be based on the desire for conception as well as on psychological characteristics. Studies on surgical management of recurrent rectovaginal endometriosis are warranted, due to the peculiar technical difficulties as well as the high risk of complications associated with this challenging disease form.

Contents

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1. Introduction

In the past two decades the growing popularity and widespread diffusion of operative laparoscopy has fostered a spread of surgical procedures in women with endometriosis [1]. However, due to the relapsing tendency of the disease, postoperative recurrences are very common [2,3]. Consequently, the clinical scenario of patients with symptomatic endometriosis has progressively changed, and management of the increasing number of subjects with severe pain in spite of one or more surgical procedure may reveal a therapeutic challenge.

In these conditions, one of the clinical dilemmas regards the indication for and the potential benefit of reoperation. In women wishing for conception, pelvic denervation may be performed in addition to repetitive conservative surgery with the intent of increasing the likelihood of enduring postoperative pain relief. When pregnancy is no longer an issue, hysterectomy with or without bilateral salpingo-oophorectomy may be considered. Moreover, the effect of postoperative medical treatment on the probability of pain relapse should be taken into account after both conservative and definitive procedures.

Unfortunately, the information on the effect of different surgical approaches to recurrent symptomatic endometriosis is scant and scattered. Consequently, we deemed it of interest to review the best evidence available on the topic in order to define the benefit of repetitive conservative surgery, the effects of pelvic denervating procedures and postoperative medical treatments, as well as the long-term outcome of definitive surgery. This should assist the clinician in formulating correct and balanced counselling in order to choose the medical decision that best matches the individual patient's needs.

2. Materials and methods

An electronic database search (Pubmed, Medline, Embase) was performed with the objective of identifying studies published in the English-language between 1990 and 2008 on the efficacy of repetitive conservative or definitive surgery for endometriosis-associated pelvic pain and on the effect of combining conservative surgery with pelvic denervating procedures or postoperative medical treatment. Medical subject heading terms including endometriosis, recurrence, pelvic pain, laparoscopy, presacral neurectomy, uterosacral ligament ablation/resection, hysterectomy, and medical treatment were used. References from retrieved papers were checked in order to identify additional reports. The year of publication, type and design of study, treatment modality and main and secondary outcomes were recorded. The number of patients with pain at baseline and at the end of follow-up was obtained from individual studies. Because the present review was not conceived as a formal systematic literature overview, a qualitative analysis of the selected studies was not planned and data pooling was performed for specific outcomes only.

3. Results

3.1. Efficacy of repetitive conservative surgery

Very limited information is available on the effect of repetitive conservative surgery for recurrent symptomatic endometriosis in terms of postoperative pain relief.

Candiani et al. [4] evaluated pain symptoms variation in 42 women undergoing second-line surgery at laparotomy for recurrent endometriosis. At reoperation, performed after a mean time period of 48 months (range, 8–120), the disease was at stage IV in 14 women, stage III in 25, and stage I in three [5]. After a mean follow-up of 42 months (range 12–119), dysmenorrhea and deep dyspareunia reappeared in eight women, and non-cyclical pelvic pain in seven. A third operation was necessary in six subjects (14%; 95% C.I., 5–29%). Noticeably, symptomatic relapse occurred in only 32 of the women who had pain as the main indication for second-line surgery. Accordingly, the symptoms recurrence rate when repeat laparotomy was performed specifically for pain is 8/32 (25%; 95% C.I., 11–43%). Postoperative medical treatment did not influence the outcome.

Busacca et al. [6] compared surgical outcomes in 81 women re-operated at laparotomy ($n = 41$) with laparoscopy ($n = 40$) after a mean time period of, respectively, 47 and 60 months. At reoperation the disease was, respectively, at stage IV in 14 and 11 women, stage III in 25 and 21, stage II in none and two, and stage I in two and six [5]. The crude recurrence rates of moderate to severe dysmenorrhea, deep dyspareunia, and pelvic pain in the subjects who referred the symptom before second-line surgery were, respectively, 22% (7/32), 30% (7/23), and 35% (9/26) in the laparotomy group, and 29% (10/35), 25% (4/16), and 32% (7/22) in the laparoscopy group. The 24-month cumulative probability of recurrence of dysmenorrhea (34% and 43%, respectively) and of non-cyclical pelvic pain was not significantly different in the two groups. However, in the patients operated by laparotomy, the rate of recurrence of deep dyspareunia (figures not reported) and the number of subjects requiring a third intervention was higher (two in the laparoscopy group and four in the laparotomy group).

More recently, Fedele et al. [7] compared the postoperative results observed after laparoscopic excision of primary ($n = 305$) with recurrent ($n = 54$) ovarian endometrioma in the same ovary of the primary cyst. The main indication for reoperation was pelvic pain ($n = 37$). After a mean follow-up of 35 months (range, 12–120), eight patients (22%; 95% C.I., from 10% to 38%) experienced a further recurrence of atleast one moderate or severe pain symptom. Including all the observed subjects, the 5-year cumulative pain recurrence rate was 20% after the first surgical procedure and 17% after the second one, and re-treatment requirement was, respectively, 19% vs. 17%. According to the authors, the effect of repetitive laparoscopic surgery on pain is similar to that observed after first-line surgery.

The results observed in the considered studies are summarized in Fig. 1.