Surgery for deep endometriosis without involvement of digestive or urinary tracts: do not worry the patients!

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Objective: To report postoperative outcomes after surgery for deep endometriosis without involvement of the digestive or urinary tracts.
Design: Retrospective study using data prospectively recorded in the North-West Inter Regional Female Cohort for Patients with Endometriosis (CIRENDO) database.
Setting: University tertiary referral center.
Patient(s): One hundred thirty consecutive patients whose follow-up ranged from 1 to 6 years.
Intervention(s): Laparoscopic excision of deep endometriosis nodules.
Main Outcome Measure(s): Postoperative complications were recorded in the CIRENDO database and medical charts. Postoperative digestive function was assessed using standardized gastrointestinal questionnaires: the Gastrointestinal Quality of Life Index and the Knowles-Eccersley-Scott Symptom Questionnaire.
Result(s): Deep endometriosis nodules involved uterosacral ligaments, rectovaginal space, and vagina and spared the bowel, the bladder, and the ureters. Nodule size was <1 cm, 1–3 cm, and >3 cm in diameter in 20.8%, 64.6%, and 14.6% of cases, respectively. Clavien-Dindo 1, 2, and 3b complications occurred in 0.8%, 4.6%, and 5.4% of cases, respectively. Among Clavien-Dindo 3b complications, most involved pelvic hematoma. Gastrointestinal scores revealed significant improvement in digestive function or defecation pain at 1 and 3 years after surgery. The pregnancy rate was, respectively, 43.3% and 56.7% at 1 and 3 years postoperatively, among which 66.7% and 64.7% were spontaneous conceptions.
Conclusion(s): Our data suggest that surgery for deep endometriosis without involvement of the digestive or urinary tracts provides a low rate of postoperative complications and satisfactory fertility outcomes. (Fertil Steril® 2018;109:1079–85. ©2018 by American Society for Reproductive Medicine.)
Key Words: Deep endometriosis, digestive function, fertility, pain, postoperative complications, pregnancy

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The main goal of deep endometriosis surgery is to relieve pain and unpleasant symptoms, improve quality of life, and minimize the risk of postoperative complications and functional disorders. However, when deep endometriosis involves the digestive and the urinary tracts, surgery may be followed by a rate of immediate complications or functional unfavorable outcomes that cannot be overlooked (1, 2). On the other hand, deep severe endometriosis always results

from the development of deep endometriosis nodules progressively growing for several years (3, 4). In fact, nobody is born with stage 4 endometriosis (5), and deep endometriosis is rare in adolescents, suggesting that it occurs progressively during adult life (6). In women with major lesions, such as those responsible for bowel occlusions or atrophy of the kidney, the disease could probably have been diagnosed and managed at earlier stages (7). Early management of endometriosis could also lead to lower rates of postoperative complications; however there is a lack of specific data in the literature on this topic. The surgery of deep endometriosis involving the digestive tract, the bladder, and the ureters has been evaluated in the literature through a myriad of retrospective case series, most of them noncomparative (8). However, there are fewer data on patients managed for deep endometriosis but free of digestive and urinary tract involvement; and yet, these locations represent most deep lesions (9).

The aim of our case series was to assess postoperative complications, improvement of pelvic pain, digestive complaints, and fertility outcomes in a series of consecutive patients managed by surgery for deep endometriosis without involvement of the digestive or urinary tracts.

MATERIALS AND METHODS

We included consecutive patients managed by surgery for deep endometriosis without involvement of the digestive or urinary tracts in the Department of Gynecology and Obstetrics of Rouen University Hospital (France) from June 2009 to December 2014, respecting a minimal follow-up of 12 months. Inclusion criteria were deep endometriosis revealed by clinical examination, transvaginal ultrasound, and magnetic resonance imaging (MRI), intraoperatively confirmed (Supplemental Fig. 1, available online); the involvement of the digestive or urinary tracts was ruled out by preoperative assessment and laparoscopy. Patients presented with at least one deep nodule located on the vagina, uterosacral ligaments, or parameters, sparing the bowel, the bladder, and the ureters.

Patients were prospectively enrolled in the CIRENDO database (the North-West Inter Regional Female Cohort for Patients with Endometriosis), a prospective cohort financed by the G4 Group (The University Hospitals of Rouen, Lille, Amiens, and Caen, France) and coordinated by the corresponding author of the present study (H.R.). Information was obtained from surgical and histologic records and from self-questionnaires completed before surgery. Data recording, patient contact, and follow-up were carried out by a clinical research technician. Postoperative follow-up was based on data from the self-questionnaires completed at 1 and 3 years. Prospective data recording and analysis were approved by the French authorities Commission Nationale de l'Informatique et des Libertés (the French data protection commission) and Comité Consultatif pour le Traitement de l'Information en matière de Recherche dans le domaine de la Santé (the advisory committee on information technology in healthcare research).

One senior gynecological surgeon with experience in surgery of deep endometriosis made decisions on the type of surgery to carry out. Postoperative treatment by continuous contraceptive pill intake in women not intending to conceive was systematically recommended.

The surgery was performed laparoscopically (Video 1). Ureterolysis was usually the first step of the surgery, followed by the opening of pararectal spaces on contact with lateral rectal walls using plasma energy. Once the rectum was pushed upward, the excision of deep endometriosis nodules was done using plasma energy, close to the macroscopic limits of the fibrous lesions and sparing the hypogastric nerves, the inferior hypogastric plexus, and the splanchnic nerves at least on one pelvic side. The deep endometriotic nodules were removed along with the vaginal cul de sac, the uterine torus, and the uterosacral ligaments whenever required. Ovarian endometriomas were managed by ablation using plasma energy.

Postoperative complications, fertility outcomes, and recurrences were recorded in medical charts and the CIRENDO database. Complications were recorded using the Clavien-Dindo classification (10).

When recurrence of endometriosis was suspected on the basis of recurrent pelvic or digestive complaints and/or clinical examination, patients underwent MRI assessment. Then patients with symptomatic evidence of deep endometriosis and inefficacy of medical therapy were offered a second surgery.

Postoperative digestive function was assessed using two gastrointestinal standardized questionnaires, the usefulness of which has previously been discussed (11, 12). For diagnosis of constipation we used the Knowles-Eccersley-Scott Symptom Questionnaire (KESS) (11), composed of 11 individual items with a maximum of 39 points. The KESS questionnaire was designed in such a way as to be completed in less than 5 minutes. Each question has four or five possible answers, scored on an unweighted linear integer scale to produce a range of between 0 and 3 or 0 and 4 points. Lower scores represent symptom-free states, whereas higher scores represent increased symptom severity. The KESS score differentiates patients with constipation for whom overall values are >10 from healthy controls for whom the median value averages 2 (range, 0–6).

The Gastrointestinal Quality of Life Index (GIQLI) (12) is a self-administered questionnaire including 36 questions concerning digestive symptoms, physical status, emotions, social dysfunction, and effects of medical treatment. Consequently, it not only includes questions on gastrointestinal symptoms but also on other aspects of quality of life and has been validated for various gastrointestinal diseases. The 36 items of the GIQLI are scored from 0 to 4, with the total score ranging from 0 (worst) to 144 (best quality of life). Total score median values vary around 126 for healthy controls.

Women were advised to take continuous contraceptive pill until menopause, unless they intended to get pregnant. In patients with pregnancy intention, full assessment was performed before discontinuation of contraception, on the basis of biological assessment and symptomatology.

Statistical analysis was performed using Stata 9.0 software (StataCorp, College Station, TX). Variables were