



Available online at
ScienceDirect
www.sciencedirect.com

Elsevier Masson France
EM|consulte
www.em-consulte.com/en



REVIEW

Endometriosis surgery and preservation of fertility, what surgeons should know



H. Roman

Clinique gynécologique et obstétricale, centre expert de diagnostic et prise en charge multidisciplinaire de l'endométriose, CHU de Rouen, 1, rue de Germont, 76031 Rouen, France

Available online 27 April 2018

KEYWORDS

Endometriosis;
Fertility;
Surgery;
Laparoscopy;
Coelioscopy

Summary Colorectal surgeons often participate in the multidisciplinary management of young females with endometriosis. Complications of endometriosis as well as its management often result in infertility since they can involve all pelvic organs including the procreative organs: uterus, ovaries and fallopian tubes. Complete excision of all endometriotic lesions should not be performed at the expense of irreversible destruction of the procreative organs; definitive infertility should not be the price to pay in order to obtain an improvement of the painful symptoms caused by endometriosis. Surgery for ovarian endometriomas should be specifically adapted to the patient's desire for future conception and to her preoperative ovarian reserve. Two main techniques are used to treat ovarian endometriomas: ovarian cystectomy excises the wall of the cyst while ablation consists of destruction of the internal surface of the cyst. The use of mono polar or bipolar coagulation for cyst ablation is strongly contra-indicated. Ablation using laser or plasma energy has resulted in comparable rates of post-operative pregnancy to those obtained by ovarian cystectomy. Patients who wish to delay their attempt to conceive for some period of time, should be placed on long-term oral contraception with prevention of menstruation to reduce the risk of recurrent endometriosis. When surgery for colorectal endometriosis is necessary, the laparoscopic approach increases the chances of spontaneous conception compared to laparotomy. Surgery for deep-seated endometriosis has been accompanied by a high rate of spontaneous conception and successful pregnancy and does not seem to decrease the chances for conception by in vitro fertilization.

© 2018 Elsevier Masson SAS. All rights reserved.

General observations

Endometriosis: a potential cause of infertility in women of childbearing age

Endometriosis is a chronic disease with a gynecological point of departure. It affects 10% of women of childbearing age

and is defined by the presence of ectopic implantation of endometrial tissue outside the uterine cavity [1]. These ectopic implants result in a wide variety of lesions in different localizations and with different evolutionary potentials; these may result in a broad range of painful symptoms, the main characteristic of which is their cyclic occurrence, coordinated with menstruation [2]. These lesions may involve any or all the organs of the pelvis (vagina, ovaries, fallopian tubes) as well as the digestive tract (rectum, sigmoid colon, cecum, ileum) and urinary tract (bladder and ureters).

E-mail address: horace.roman@gmail.com

<https://doi.org/10.1016/j.jviscsurg.2018.03.002>

1878-7886/© 2018 Elsevier Masson SAS. All rights reserved.

Infiltration of these organs usually leads to specific manifestations, and may be responsible for infertility [2]. It is important to emphasize that the surgical management of different forms of endometriosis depends not only on the characteristics and localization of the endometriosis lesions, but above all on the general characteristics of the woman (age, parity, subsequent desire for pregnancy, symptoms) [3]. These factors determine not only the type of surgical intervention, but also lead to the development of individualized therapeutic approaches that evolve over time from puberty to menopause. The goal of these approaches is to reduce the risk of recurrence over time, while maximizing the quality of life and chances of eventual pregnancy [3,4].

Endometriosis can present at any time from puberty to menopause. The symptoms of endometriosis are generally more marked in women who have regular monthly menstrual periods and whose ovarian activity is not inhibited by hormonal contraception. Therefore, endometriosis is often diagnosed in adolescents [4], in nulliparous young women who stop contraception to become pregnant, or in multiparous women who have chosen a mechanical method of contraception (copper intra-uterine device (IUD), condom, etc.) while waiting for the moment of desired conception. In all these cases, preservation of conception possibilities must be a key principle of surgical management.

Requirements for maintaining the possibility of conception

In order to maintain the chances of a young woman with endometriosis to successfully conceive after surgery, the surgeon must pay particular attention to three organs: the uterus, the fallopian tubes and the ovaries. Conception after the surgery can be realized either spontaneously (following a sexual relation, without medical assistance) or by a technique of medically assisted procreation (MAP) involving the stimulation of the ovulation, intrauterine insemination (IUI), or IVF.

At this time, spontaneous conception by MAP requires preservation of the uterus and at least one ovary. Spontaneous conception by ovarian stimulation or IUI also requires the existence of one fallopian tube in good condition (without adhesions or strictures and with open fimbriated end); in the case of bilateral tubal destruction or bilateral salpingectomy, IVF is the only chance of conception. On the other hand, if IVF is being considered, its chances of success are decreased by preservation of fallopian tubes that are dilated, obstructed or likely to become so; in these situations, salpingectomy may be a necessary gesture [5].

The mere presence of conserved ovarian tissue is not sufficient to allow conception, because it is still necessary that they have the capacity to release eggs of satisfactory quality for fertilization that allow the development of an embryo. The ability to release eggs is related to the "ovarian reserve" (a term that estimates the remaining oocyte stock) and the age of the patients. Overall, the lower the ovarian reserve, the lower the chances of conceiving by IVF [6]. It is therefore important to emphasize that a surgical procedure when the surgeon treats cystic lesions of ovarian endometriomas can directly impact the parameter of ovarian reserve. A marked decrease in ovarian reserve after surgery, in association with absent or damaged fallopian tubes, can destroy the chances of spontaneous conception or IVF [6]. In the case of IVF conception, the ovarian reserve conditions the response to ovarian hyperstimulation and of

eventual pregnancy rates [7]. Conception remains a possibility in a woman with complete loss of ovarian reserve, if oocyte donation can be obtained, but this solution is difficult because of the shortage of anonymous oocyte donors in France and the possible psychological impact on the recipient. It should not be considered an easy alternative that justifies overly deleterious surgery. When a woman wants to maintain her reproductive capacity, the surgeon must make a surgical decision about the uterine, tubal and ovarian lesions, in light of all the factors listed above. Even in the case of low pre-operative ovarian reserve, surgery can provide satisfactory overall pregnancy rates, as long as it can improve the chances of spontaneous conception, thus offsetting the poorer outcomes of IVF conception [8].

Treatment of endometriosis lesions

We will not discuss treatment of extra-abdominal endometriosis lesions since these do not affect fertility.

Surgery for ovarian endometriomas

Surgery for ovarian endometriomas may result in reduced ovarian reserve [9–11] by excision or destruction of the ovarian parenchyma surrounding the endometrioma cyst; this may possibly have negative effects on post-operative fertility. When the patient has one or more ovarian endometriomas, the main objective of the ovarian gesture is the preservation of ovarian reserve. This major objective outweighs that of complete eradication of ovarian cysts. In other words, the surgeon should err on the side of recurrent endometriosis due to incomplete treatment of ovarian lesions rather than risk a severe reduction of ovarian reserve following complete resection of endometriomas [12]. Currently two major techniques are used in the treatment of ovarian endometriomas: cystectomy respecting the wall of the cyst and ablation consisting of destruction of the internal surface of the cyst. To understand how the two techniques treat endometrioma, to the surgeon must know the histological peculiarities of ovarian endometrioma. According to Hughesdon's theory, an ovarian endometrioma is the result of an invagination of the endometrial tissue in the ovarian cortex along with accumulation of endometrial remnants of menstrual bleeding localized on the surface of the ovary that adhere to the peritoneum [13]. This theory holds true in more than 90% of ovarian endometriomas. [14]. A second, more recent theory proposed by Donnez and Nisolle (Donnez is cited as first author in this paper...) estimates that endometriomas arise from endometrioid metaplasia of the coelomic epithelium that invaginates into the ovarian cortex, a theory that is true for 100% of cases of ovarian endometriomas [15]. These two theories are of major importance for surgeons in that they show that resection of an endometrioma does not require a central incision of the ovarian parenchyma since it can be performed by a small direct incision at the level of the origin of the invagination, at a point where ovarian parenchyma is absent [16].

All surgeons who practice this procedure on young women should be familiar with the technique of endometrial cystectomy. During cyst excision, three distinct areas of the cyst can be identified, and each requires a different surgical procedure (Fig. 1) [16,17]. Zone A, circumscribing the origin of the cyst invagination, measures approximately 1 cm² and is discovered when the ovary is freed from its adhesions that bind it to the peritoneum of the ovarian fossa. During

Download English Version:

<https://daneshyari.com/en/article/8729973>

Download Persian Version:

<https://daneshyari.com/article/8729973>

[Daneshyari.com](https://daneshyari.com)