THE PUBLISHING HOUSE
OF THE ROMANIANACADEMY

Supplement 1/2015, 4th ISAA

THE RATE OF SPONTANEOUS PREGNANCY AFTER LAPAROSCOPIC TREATMENT FOR ENDOMETRIOSIS

Raluca Gabriela SUBA, Ion IONUT and Bogdan MARINESCU

"Professor Dr Panait Sirbu" Obstetrics and Gynecology Hospital, Bucharest, Romania
Corresponding Author: Raluca Gabriela SUBA, E-mail ralucasuba@yahoo.co.uk

Accepted November 16, 2015

No consensus exist on how to manage patients with ovarian endometriomas and deep endometriosis regarding the impact on fertility preservation and recurrence rates. There is a retrospective study accomplish in "Professor Dr. Panait Sirbu Hospital" among 3 years. The study included patients with ovarian endometriosis and deep endometriosis who have also associated primary infertility and secondary infertility. 112 women included in this study had laparoscopic cystectomy (unilateral/bilateral) and excision of pelvic endometriosis implants. The patients complete a questionnaire regarding a pain scale and quality of life. From the 112 women included in this study, only 79 wanted to conceive and 51 get pregnant. Only 4 women said that they did not feel any improvement regarding the quality of life and the rate of pain recurrence was 2,6% (3 patients) at 6 month and 8% (9 patients) at 12 month.

Key words: endometriosis, pregnancy, infertility, pain scale, quality of life.

INTRODUCTION

Endometriosis is a common gynecological disorder in which endometrial tissue (glandular epithelium and stroma) is found outside the uterine cavity.
Characteristic symptoms include dyspareunia, severe dysmenorrhea and chronic pelvic pain[1]. Endometriosis mostly presents as ovarian cysts and superficial and deep pelvic peritoneal implants and adhesions. Endometriotic ovarian cysts can be reliably identified by transvaginal ultrasound. A trained sonographer can easily distinguish endometriomas from other ovarian cysts for their characteristic echogenic appearance. Instead, detection of peritoneal implants and adhesions requires direct visualization of the pelvis through a laparoscopic examination. Classically it has been claimed that about 10% of women in the reproductive age have endometriosis[2], although such affirmation lacks of a solid background.. Endometriosis is the third leading cause of gynecologic hospitalization in the United States[3].
The prevalence in women undergoing laparoscopy because of infertility was from 2.1% to 77.1% and in women undergoing laparoscopy for pelvic pain was 2.15 to 83.6%. Many of these different access to laparoscopy (indications, previous work-up, general availability of infertility treatments)[4]. It seems that there is an increasing frequency of reporting endometriosis, although it is not clear whether this corresponds to a true increase in the occurrence of endometriosis or to improved diagnosis.
There are still controversy regarding if endometriosis cause infertility. What is easy to conclude is that endometriosis can cause mechanical infertility because of destruction of ovarian tissue, adhesions with distortion of pelvic architecture interfering with the release of the oocytes and the tubal pick-up of these oocytes, fimbrial distortion or occlusion, hydrosalpinx or proximal tubal
obstruction. However, there is controversy about whether minimal endometriosis causes infertility.
Surgical treatment of superficial endometriotic lesions and ovarian endometriomas has been properly classified now. Laparoscopic surgery has become the gold standard for treatment of ovarian endometriosis[5]. A Cochrane review concluded that excisional surgery of ovarian endometriosis results in a more favorable outcome than drainage and ablation with regard to recurrence, pain symptoms and subsequent spontaneous pregnancy in women who were previously subfertile[6]. However, both excision and ablation may damage normal ovarian cortex. The current technique of ovarian endometrioma capsule excision may lead to the removal of normal ovarian tissue, causing loss of follicles[7]. On the other hand, capsule ablation may lead to thermal (heat) damage to the underlying ovarian cortex[8].
It is well known that medical therapy alone has a limited role in the treatment of endometriomas. Conservative medical treatment, independently of the prescribed product, may lead simply to a reduction in volume rather than complete regression[9].
A wide spectrum of non-medical options has been proposed. The ultrasound-guided aspiration, although feasible, is associated with a high rate of recurrences even when combined with systemic or local medical treatments. Regardless of the technique applied, pregnancy rates after laparoscopic treatment of endometriosis have been reported to vary between 23 and 67% [10-12]. Several factors may explain the wide variation in the success percentages. In particular, pregnancy rate may be significantly influenced by the number and characteristics of patients enrolled, length of follow-up, selection criteria, adhesion score and surgical technique.

MATERIAL AND METHODS

It is a retrospective study accomplish in *"Prof. Dr Panait Sirbu*" Hospital among 1st of January 2011 and 31 of December 2013 and included 112 patients. Age range was 18-40 years. The study included all of the patients who have been diagnosed with endometriosis (unilateral or bilateral ovarian cysts, deep infiltrating endometriosis), who have also primary and secondary infertility.

The diagnostic suspicion was made using a detailed anamnesis, clinical examination and pelvic ultrasound scans. The common symptoms associated with endometriosis are dysmenorrhea, pelvic pain at other times of the menstrual cycle and dyspareunia. The presence of these symptoms was used as a screening test to identify patients requiring the "gold standard" diagnostic test of a laparoscopy.. Clinical examination consisted in a routine colposcopy and vaginal tact. The symptoms described was pain at the level of the ovary, vaginal pain with rectal irradiation and rectovaginal nodules.

The only widely accepted use of ultrasound in diagnosing endometriosis is in the detection of ovarian endometriomas. An endometrioma, or "chocolate cyst" may be unilateral or bilateral. The endometrioma is filled with old blood, giving a typical ground-glass appearance with low-level echoes. Ultrasound has a high sensitivity and specificity for diagnosing ovarian endometriomas, but has been relatively poor at diagnosing peritoneal endometriosis.

The diagnosis was made during laparoscopy. The surgical procedure requires a general anesthetic for the patient, and provides a panoramic view of the pelvis from the ombilical port site after insufflation of the peritoneal cavity with CO2 gas.

The severity of the endometriosis was scored according to the revised American Society for Reproductive Medicine Classification. A score is assigned to endometriotic lesions on the peritoneum and ovaries (based on size, location and depth), to posterior cul de sac endometriosis (partial and complete obliteration), and to adhesions on the ovaries and tubes (based on whether adhesions are filmy or dense, and the proportion of the tube or ovary covered). Stage of disease is divided into: Stage I (minimal)-score 1-5; Stage II (mild)-score 6-15; Stage III (moderate)-score 16-40; Stage IV (severe) –score >40.

The 112 women included in this study benefited by laparoscopic cystectomy (unilateral/ bilateral) and excision of pelvic endometriosis implants. To minimize inter-operator variability in surgical technique, we included only laparoscopic treatment performed by the same experimented surgery teem. (I.I, B.I, H.A, S.R)

The ESHRE, the American Society for Reproductive Medicine and the Royal College of Obstetricians and Gynecologist, published guidelines and recommendation for the management of women with endometriosis. There is general agreement on most issues regarding the suggested clinical conduct in the case of endometriosis-associated infertility. The three organizations recommend surgery for peritoneal endometriosis (stage I-II disease), although ESHRE and ASRM acknowledge that the benefit is limited. Consensus also exist on ovarian endometriomas (stage III-IV disease), as the effect of surgery is always defined "possible". In spite of this consideration, ESHRE and ASRM suggest surgical removal of endometriotic cysts, whereas the RCOG does not give a specific indication.

According to the protocols, all of the 112 patients enrolled in the study followed laparoscopic surgery. Brifly, the surgery procedures: introduce the trocars, first (ombilical trocars), the second one at the level of left iliac fossa, third one above the pubic symphysis and the forth one at the level of right iliac fossa. Inspection of the abdominal and pelvic cavities, (Figure 1) adesiolysis, remove the ovaries from the ovarian fossa, if the ovaries are bulky, then it is useful to suspend them at the abdominal wall. If the endometriomas are greater then 4mm it can be useful to break the cyst and to aspire the chocolate liquid in order to improve the view. View with dissection both ureters, deep infiltrating endometriosis was completely excised (Figure 3) using mechanical instruments and electrosurgery (monopolar and bipolar). Peritoneal superficial endometriotic lesions were excised or coagulated with bipolar current. Patients with colorectal endometriosis received excision of nodules by shaving.(Figure 2) There was some cases[12] with deep infiltrating colorectal nodules which requires disc excision or colorectal resection, but our hospital does not benefit from a digestive surgeon. There was no patients with large colorectal infiltration responsible for advanced stenosis. Ovarian endometriosis were excised by the stripping technique at the end of the surgery.

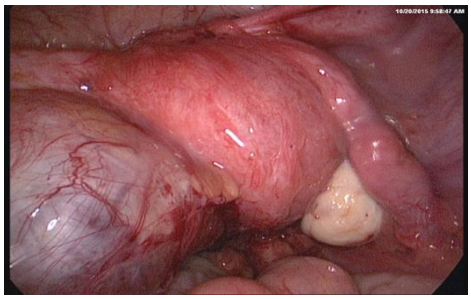

Figure 1 Preoperative Evaluation

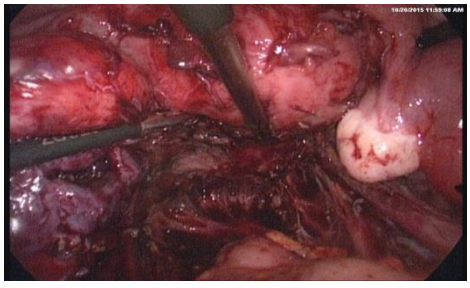

Figure 2 Shaving of colorectal nodules

Figure 3 Rectovaginal Endometriotic Lesion

Post-operatively, the surgeon advised patients on their capacity to conceive and recommended attempting spontaneous conception. After histopathological tests confirmed endometriosis, the patients were included in the study. The patients signed the informed consent before inclusion in the study, and this study was approved by Ethical Committee.

RESULTS AND DISCUSSIONS

From the 112 women who were treated for endometriosis between 2011 and 2013, only 79 wanted to conceive and 51 get pregnant (64,55%). 34 obtained spontaneous pregnancy and 17 an IVF pregnancy. In group of 79 patients who wanted to get pregnant 58 had a personal history of infertility.

Regarding the quality of life in the present, the patients responded: very much (63) (56,25%), a lot (36) (32,14%), a little (9) (8,03%), at all (4) (3,57%).

The pain recurrence was 2,6% (3 patients) at 6 month and 8% (9 patients) at 12 month. The most commonly and upsetting symptom was dysmenorrhea (Figure 4) described by 76 patients (67,85%),followed by dyspareunia 21 patients (23,52%) and rectal pain 15 patients (16,8%).

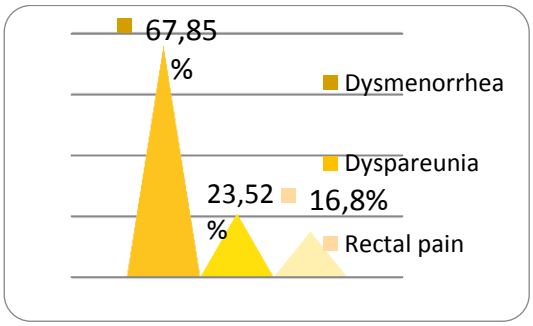

Figure 4 The most common symptom

Postoperative medical treatment (GnRH agonist, oral contraceptive, oral progesterone) was not given to the patients, because that could have hidden the recurrence of the disease and could have made the pregnancy impossible

CONCLUSIONS

Surgical procedures used (cystectomy, excision of peritoneal endometrial implants, rectovaginal shaving) allows a high rate of postoperative spontaneous pregnancy and a low rate of pain recurrence. The rate of pregnancy after laparoscopic treatment for endometriosis (64,55%) was similar with other studies (66,9%)[13]. Endometriosis is a complex disease that can involve the urinary bladder, the ureter, colon and the rectum. We suggest an operating team composed of a gynecologist, a general surgeon and an urologist. The technical skill, operative experience and techniques used by the surgeon are the most important factors which determine the outcome of endometriosis surgical treatment.

Acknowledgment *This work was co-financed from the European Social Fund through Sectoral Operational Programme - Human Resources Development 2007-2013", project number POSDRU/187 /1.5/S/155631, entitled "Scientific excellence, knowledge and innovation through doctoral programs in priority areas", Beneficiary – Medicine and Farmacy University "Carol Davila" Bucharest.*

REFERENCES

1.Hart R. Unexplained infertility , endometriosis and fibroids BMJ, 2003, 327, 721-724

2.Eskenazi B, Warner ML Epidemiology of endometriosis. ObstetGynecol Clin North Am 1997;24-235-58

3. Velebil P Wingo PA Xia Z . Wilcox LS, Peterson HB. Rate of hospitalization for gynecologic disorders among reproductive-age women in the United States. Obstet Gynecol 1995;86:195-99

4. GuoSW, Wang Y. Sources in heterogeneities in estimating the prevalence of endometriosis in infertile and previously fertile women Fertil Steril 2006; 85:1584-95

5. Canis M, Mage G, Wattiez A, Pouly JL, Bruhat MA The ovarian endometrioma: why is it so poorly managed? Laparoscopic treatment of large ovarian endometrioma: why such a longlearning curve?Hum Reprod 2003, 18, 5-7

6. Hart RJ, Hickey M, Maouris P, Buckett W. Excisional surgery versus ablative surgery for ovarian endometrioma Cochrane Database 2008; 2:CD004992-CD004992

7.Hachisuga T, Kawaeabayashi T Histopatological analysis of laparoscopically treated ovarian endometriotic cysts with special reference to loss of follicles. Hum Reprod 2002, 17, 432-435

8. Maouris P , Brett L.Endometriotic ovarian cysts: the casefor excisional laparoscopic surgery Gynecol Endocrinol 2002, 11, 231-234

9. Chapron C, Vercellini P, Barakat H, Viera M and Dubuisson JB Management of ovarian endometriomas Hum Reproduc Update 2002, 8 591-597

10. Jones KD and Sutton CJ Pregnancy rates following ablative laparoscopic surgery for endometriomas Hum Reprod., 2002, 17, 782-785

11. Elisheikh A , Milingos S, Loutradis D, Kalipolitis G and Michalas S Endometriosis and reproductive disorders Ann N YAcad Sci., 2003, 997, 247-254

12. Alborzi S, Momtahan M, Parsanezhad ME, Dehbashi S, Zolghadri J. Alborzi S A prospective, randomized study comparing laparoscopic ovarian cystectomy versus fenestration and coagulation in patients with endometriomas. Fertil Steril. 2004, 82, 1633-1637

13. Horace Roman, Solene Quibel, Mathieu Auber, Helene Musynski,Emmanuel Huet, Loi Marpeau and Jean Jacques Tuech Reccurrences and fertility after endometrioma ablation in women with and without colorectal endometriosis, a prospective cohort study 2014, 30, 558-568