

CLINICAL OUTCOMES OF LAPAROSCOPIC AND CONSERVATIVE TREATMENT OF ENDOMETRIOTIC OVARIAN CYSTS

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Abstract. *This study looked at the results of medicine and laparoscopic treatment in women with endometriotic ovarian cysts. The study included women with different symptoms, mainly painful periods and pain in the lower abdomen. Ultrasound was used to find the cysts and check the ovaries. Some women received medicine treatment, while others had laparoscopic surgery.*

After treatment, many women had less pain. Laparoscopic treatment helped remove the cyst and reduce pain. Medicine treatment also helped control pain in some women. Some women became pregnant after treatment, while pregnancy was more difficult for women with more serious disease. The results showed that both treatment methods can be useful. The treatment should be chosen according to the woman's condition, ovarian function, and plans for pregnancy.

Keywords: *Endometriosis, laparoscopy, medicine treatment, ovarian function, pelvic pain, pregnancy, infertility.*

Introduction

Endometriotic ovarian cysts are a common manifestation of endometriosis in women of reproductive age and may significantly affect quality of life and reproductive function. They are often associated with dysmenorrhea, chronic pelvic pain, dyspareunia, menstrual disorders, and infertility.

The clinical course of the disease may vary depending on the size of the cyst, duration of the disease, ovarian reserve, and the presence of other endometriotic lesions. Treatment of endometriotic ovarian cysts includes conservative medical therapy and laparoscopic surgery.

Conservative treatment is mainly aimed at reducing pain and controlling disease activity, while laparoscopic treatment allows direct removal of the cyst and assessment of pelvic pathology.

However, surgical intervention should be carefully performed to minimize damage to healthy ovarian tissue and preserve ovarian reserve. Therefore, comparison of laparoscopic and conservative treatment outcomes is important for selecting an individualized treatment strategy.

The patient's age, symptoms, ovarian reserve, disease severity, and reproductive plans should be considered when determining the optimal method of treatment.

Relevance

Endometriotic ovarian cysts can cause pelvic pain, menstrual disorders, infertility, and reduced quality of life. Therefore, comparing conservative and laparoscopic treatment methods is important for choosing an effective approach while preserving ovarian function and reproductive potential.

Aim

To evaluate and compare the clinical outcomes of laparoscopic and conservative treatment of endometriotic ovarian cysts, focusing on symptom improvement, recurrence, ovarian reserve, and reproductive outcomes.

Main part

Endometriotic ovarian cysts are a common manifestation of endometriosis in women of reproductive age and can have a significant impact on women's quality of life and reproductive health. The clinical presentation of endometriotic cysts varies depending on the size and location of the lesion, duration of the disease, severity of endometriosis, and presence of associated pelvic pathology. The most common symptoms include dysmenorrhea, chronic pelvic pain, dyspareunia, menstrual disorders, and infertility. Some patients may have mild symptoms, while others experience persistent and severe pelvic pain that can interfere with daily activities. A detailed medical history and gynecological examination are important components of the initial assessment. Transvaginal ultrasonography is widely used for the detection and characterization of ovarian endometriomas and provides information about their size, structure, and localization. In selected cases, magnetic resonance imaging can be used to evaluate the extent of deep endometriosis and associated pelvic lesions. Assessment of ovarian reserve is also important, particularly in women who wish to become pregnant. Anti-Müllerian hormone levels and antral follicle count may provide useful information about ovarian function. Previous ovarian surgery should also be considered because repeated surgical intervention may influence ovarian reserve.

Therefore, comprehensive diagnostic assessment should include clinical symptoms, imaging findings, ovarian function, reproductive history, and future fertility plans. Such an individualized approach allows clinicians to determine the severity of the disease and select an appropriate treatment strategy.

Conservative treatment plays an important role in the management of endometriotic ovarian cysts, particularly in patients who do not require immediate surgical intervention. The main purpose of medical therapy is to reduce pain, control disease-related symptoms, and improve quality of life. Hormonal treatment can suppress ovarian hormonal activity and reduce the stimulation of endometriotic lesions. The choice of medication should be individualized according to the patient's symptoms, age, treatment preferences, contraindications, and reproductive plans.

Conservative management may be appropriate for patients with manageable symptoms and stable disease who prefer to avoid surgery. Clinical follow-up is necessary to evaluate the effectiveness of treatment and monitor changes in symptoms. In some patients, pain and menstrual symptoms may decrease considerably during medical treatment. However, conservative therapy does not necessarily remove an established ovarian endometrioma. Persistent or recurrent cysts may therefore require continued imaging and clinical assessment. Particular attention should be given to patients with increasing cyst size, persistent pain, or changes in clinical findings. Quality of life and functional status should also be considered when evaluating treatment effectiveness. In women who are actively trying to conceive, hormonal suppression is not used to improve spontaneous pregnancy rates, and fertility management should be planned separately.

Thus, conservative treatment can provide effective symptom control in appropriately selected patients, while regular follow-up allows timely modification of treatment when necessary.

Laparoscopic treatment is an important surgical approach for the management of endometriotic ovarian cysts. This minimally invasive method allows direct visualization of the pelvic organs and identification of endometriotic lesions and adhesions. Depending on the clinical situation, laparoscopic treatment may include removal of the cyst wall and treatment of associated endometriotic lesions. One of the major advantages of laparoscopy is the possibility of treating the ovarian lesion while simultaneously assessing other pelvic structures. Surgical treatment may provide significant improvement in pain-related symptoms, including dysmenorrhea and chronic pelvic pain, in appropriately selected patients. However, ovarian surgery requires careful technique because removal of an endometrioma may unintentionally damage healthy ovarian tissue. This is particularly important in women with reduced ovarian reserve, previous ovarian surgery, or plans for future pregnancy. Before surgery, the potential benefits and risks should therefore be discussed with the patient. Postoperative assessment should include evaluation of pain symptoms, ovarian function, and possible complications. Recurrence is also an important consideration because endometriosis is a chronic disease and ovarian endometriomas may develop again after treatment. In patients with infertility, the decision to perform laparoscopic surgery should take into account age, duration of infertility, ovarian reserve, disease severity, and other fertility factors. Therefore, laparoscopic treatment can provide important clinical benefits, but the surgical strategy should aim to achieve effective treatment while preserving as much healthy ovarian tissue as possible.

Comparative assessment of laparoscopic and conservative treatment is important for determining the most appropriate management strategy for patients with endometriotic ovarian cysts. Both approaches have specific advantages and limitations, and treatment should be selected according to individual clinical characteristics. Conservative therapy primarily focuses on controlling pain and reducing disease activity without direct surgical removal of the cyst. In contrast, laparoscopic treatment provides an opportunity to remove the ovarian lesion and treat associated pelvic pathology. Improvement in pain symptoms is an important outcome for both treatment approaches. However, the persistence or recurrence of the cyst should also be considered when evaluating long-term effectiveness. Ovarian reserve represents another important factor in the comparison because surgical treatment may affect ovarian function, especially when ovarian tissue is inadvertently damaged. Age, reproductive plans, infertility duration, previous surgery, and severity of endometriosis should therefore be included in treatment decisions.

Conservative management may be suitable for patients with controlled symptoms and no immediate indication for surgery. Laparoscopic treatment may be considered when symptoms persist despite medical treatment or when surgical intervention is clinically indicated. In women with infertility, treatment selection should also consider whether surgery is likely to contribute to the overall fertility strategy. Shared decision-making between the patient and healthcare provider is important because treatment preferences and reproductive priorities can vary considerably.

Therefore, neither laparoscopic nor conservative treatment should be regarded as universally superior, and an individualized approach is required to achieve an appropriate balance between symptom control, treatment effectiveness, ovarian preservation, and reproductive potential.

Evaluation of clinical and reproductive outcomes is an important component of long-term management of endometriotic ovarian cysts. Treatment effectiveness should not be assessed only by reduction in cyst size or improvement of pain symptoms. Reproductive function, ovarian reserve, recurrence, and quality of life are also important outcomes. Endometriosis may negatively affect fertility through ovarian and pelvic changes, including endometriomas and adhesions.

Therefore, reproductive assessment is particularly important in women who plan pregnancy. Age, duration of infertility, ovarian reserve, disease severity, and previous ovarian surgery can influence reproductive outcomes. In selected patients, pregnancy may occur spontaneously after treatment, while others may require assisted reproductive technologies. The choice between conservative treatment, laparoscopic surgery, and fertility-directed management should therefore be based on the individual reproductive situation. Preservation of ovarian tissue is especially important in younger women and patients with reduced ovarian reserve. Long-term follow-up is necessary to identify recurrence, persistent symptoms, or changes in ovarian function.

Patients who undergo laparoscopic treatment may require postoperative monitoring of ovarian reserve and reproductive status. Patients receiving conservative treatment may also require periodic clinical and imaging assessment to monitor the ovarian cyst. Regular follow-up allows treatment to be modified according to changes in symptoms, cyst characteristics, and reproductive plans. Overall, successful management should combine adequate symptom control with preservation of ovarian function and reproductive potential. An individualized and multidisciplinary approach may contribute to improved long-term clinical and reproductive outcomes in women with endometriotic ovarian cysts.

Results

The study included women with ovarian endometriotic cysts. Most women had painful periods and pain in the lower abdomen. Some women also had pain during sexual intercourse.

Ultrasound was used to check the ovaries and find the cysts. In some women, changes in the pelvic area were also found. The women received different types of treatment. Some received medicine, while others had laparoscopic surgery. The treatment was chosen according to the woman's condition and plans for pregnancy. After treatment, many women felt less pain.

Laparoscopic treatment helped reduce pain and remove the cyst in many cases. Medicine also helped control pain in some women. Some women became pregnant after treatment.

Pregnancy was more common in younger women and in women with better ovarian function. Women with more serious disease had more problems with pregnancy. The results show that both medicine and laparoscopic treatment can help women with ovarian endometriotic cysts.

The treatment should be chosen for each woman separately.

Discussion

The results of the study showed that endometriotic ovarian cysts can cause pain and problems with pregnancy. Most women had painful periods and pain in the lower abdomen. Some women also had pain during sexual intercourse. Ultrasound was useful for finding the cysts and checking the ovaries. The choice of treatment depended on the woman's age, symptoms, general condition, and plans for pregnancy. After laparoscopic treatment, many women had less pain and the cyst was removed. Medicine treatment also helped reduce pain in some women. However, in some cases, the cyst remained or came back. Younger women and women with better ovarian function had better pregnancy results. Women with more serious disease had more problems with becoming pregnant. These results show that the treatment should be chosen carefully for each woman. The doctor should consider not only the cyst but also the woman's future pregnancy plans.

Conclusion

The study showed that both medicine treatment and laparoscopic treatment can be useful for women with endometriotic ovarian cysts. Laparoscopic treatment helped remove the cyst and reduce pain. Medicine treatment also helped control pain in some women. The choice of treatment should depend on the woman's age, symptoms, ovarian function, and plans for pregnancy. It is especially important to protect ovarian function in women who want to have children. Women should also be checked regularly after treatment to see if the cyst comes back or if symptoms return. In general, choosing the right treatment for each woman can help achieve better results.

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