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Original Article

Tertiary Center Experience with the Treatment and Follow-Up of Endometriosis

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ABSTRACT

Objective: Endometriosis is a chronic disease that affects 10% of women of reproductive age. No curative treatment is currently available due to the as yet unclear pathophysiology. Therefore, clinical experience and additional knowledge of the disease has great value. This study was an investigation of the demographic characteristics, symptoms, medication use, analgesic need, and treatment methods of endometriosis patients at a tertiary gynecological clinic in order to evaluate long-term clinical strategies.

Methods: This retrospective, descriptive case study was conducted at a tertiary gynecological clinic. A database search of records from November 2012 to July 2020 yielded a total of 1098 patients for initial inclusion in the study. Age, gravidity, parity, surgical history, and demographic characteristics were recorded, as well as the diagnostic methods, medical and surgical treatment strategies, hospitalization duration, and need for analgesic medication.

Results: In all, 873 patients had stage 3 disease and 6 patients were diagnosed with stage 4 disease. Of the study group, 47% of the patients were diagnosed using ultrasound and 53% were diagnosed surgically. An assessment of the surgical techniques used revealed that 144 patients underwent laparoscopic surgery while 235 underwent a laparotomy. The mean duration of hospitalization following a laparoscopy was 2.68±1.02 days, whereas the mean length of stay following a laparotomy was 3.45±1.69 days. Analysis of the medical treatment strategies applied indicated that 110 patients were given a combined oral contraceptive (COC), 36 received progesterone, and 525 were treated with dienogest.

Conclusion: Although there has been an ongoing search for a curative treatment for endometriosis for some time, the treatment options have not changed dramatically over the years. Laparoscopic surgery has largely taken the place of a laparotomy as surgeons became more experienced and progestins have gained more importance as a medical treatment option. However, at present, regardless of treatment strategy, endometriosis still requires a long period of treatment and follow-up.

INTRODUCTION

Endometriosis affects an average of 1 out of 10 women of reproductive age, which is approximately 190 million women worldwide.[1] It is a chronic inflammatory condition where tissue resembling that of the inner lining of the uterus grows elsewhere in the body, most commonly in the pelvis. It is prevalent among women presenting with infertility and chronic pelvic pain.[1–3] Severe dysmenorrhea, pelvic pain, dyspareunia, painful gastrointestinal symptoms, and subfertility are symptoms associated with endometriosis and each may cause a decrease in quality of life.[1,3]

The pathophysiology of endometriosis is not yet clear. There are several proposed theories, such as retrograde menstruation, coelomic metaplasia, and induction theory.[1,4] However, none of these is sufficient to explain the complex mechanism of the disease. In addition, the symptomatology varies, which makes the diagnosis and treatment of the disease complicated.[5] Currently, there are no curative treatment options and a personalized treatment plan is designed for each patient according to her symptoms, fertility plans, and the extent of the disease. Since it is a chronic disease without a cure, patients are followed up for an extended period of time and treatment plans are customized for long duration.[5] The clinical experience of the physician is of great importance to designing the best strategy.

The purpose of this study was to investigate the demographic characteristics, symptoms, medication use, analgesic need, and treatment methods of endometriosis patients at a tertiary gynecological clinic to evaluate long-term clinical strategies.

MATERIALS AND METHODS

This retrospective, descriptive case study was conducted at Istanbul Kanuni Sultan Suleyman Research and Training Hospital. The hospital clinical research ethics committee granted approval for the research (KAEK/2020.07.130).

A database search of records from November 2012 to July 2020 yielded 1160 patients who had been diagnosed with endometriosis using ultrasound or surgically.[6] Of the initial group, 62 patients were excluded due to missing information in their files, and a total of 1098 patients were included in the study. Age, gravidity, parity, surgical history, and demographic characteristics were recorded. Details of diagnostic methods, medical and surgical treatment strategies, length of hospitalization, and the need for analgesic medication were also noted.

Statistical analysis

The data were analyzed using SPSS for Windows, Version 15.0 software (SPSS Inc., Chicago, IL, USA). Descriptive statistics were reported as number and percentage for categorical data, and the mean, SD, minimum and maximum for numerical variables. A p value of <0.05 was considered statistically significant.

RESULTS

The mean age of the patients was 32.26±7.78 years. The mean gravidity and parity value was 1.13 and 0.93, respectively. Among the group, 873 patients had stage 3 disease, whereas 6 patients were diagnosed with stage 4 disease. In all, 47% of the patients were diagnosed using ultrasound and 53% were diagnosed surgically (Table 1).

Evaluation of the surgical techniques used indicated that 121 patients underwent laparoscopic surgery and 258 underwent a laparotomy. Further breakdown of the surgical interventions revealed 87 laparotomic cystectomies, 197 laparoscopic cystectomies, 34 laparotomic unilateral salpingo-oophorectomies, 24 laparoscopic unilateral salpingo-oophorectomies, 13 laparoscopic cyst aspirations, and 24 diagnostic laparoscopies. The mean length of hospitalization following a laparoscopy was 2.68±1.02 days, while the mean following a laparotomy was 3.45±1.69 days (Table 2).

Table 1. Demographic data and results of the study group

	n=1098
Age (years)	32.26±7.78
Gravida	1.13±1.35
Parity	0.93±1.06
Endometrioma volume (cm^3)	5.57±1.23
Stage of endometriosis	
3	873
4	6
Diagnosis with	
Ultrasound	47%
Surgery	53%
Medical treatment	
Combined oral contraceptive	110
Progestin	36
Dienogest	525

Table 2. Comparison of patients according to surgery type

	Laparotomy (n=121)	Laparoscopy (n=258)
Cystectomy	87	197
Unilateral salpingo-oophorectomy	34	24
Cyst aspiration	–	13
Diagnostic laparoscopy	–	24
Hospitalization duration (days)	3.45±1.69	2.68±1.02

Investigation of the medical treatment strategies disclosed that 110 patients received a combined oral contraceptive (COC), 36 were given progesterone, and 525 were treated with dienogest. Of these patients, 102 underwent a surgical intervention following medical treatment. Hormonal therapies were continued following surgery. No need for analgesia was recorded in 299 cases, while analgesic medication was administered to 791 patients. Of these 791 patients, 398 were treated with multimodal analgesia.

DISCUSSION

At present, endometriosis has an undetermined pathophysiology and there is no curative treatment.[7] As understanding of the disease mechanism and its clinical presentation has deepened and as physicians become more aware of the disease, the number of endometriosis diagnoses has increased.[8]

Since there is little association between disease severity and the symptomatology of the disease, it can take a long time until a patient receives a confirmed diagnosis of endometriosis.[9] The worldwide average length of time between symptom onset and a definitive diagnosis is 8 years or more.[10] Most patients are already at stage 3 or 4 of the disease when diagnosed, which was also the case in this study. This delay means that treatment is more difficult. A more aggressive approach may be necessary to control advanced disease.[11]

Research in the field of medical treatment for endometriosis is ongoing. Currently, progestins, COC, and gonadotropin-releasing hormone antagonists and analogues are among the most commonly used options.[6] The medical treatment modalities have not changed dramatically, and the results of this study also reflected this pattern. However, a recent development can be seen in postsurgical treatment. Postoperative patients who do not wish to conceive continue treatment with hormonal medication.[12]

Since the most common symptoms associated with endometriosis involve pain, such as dysmenorrhea, dyspareunia, and chronic pelvic pain, analgesic medications are an important part of endometriosis treatment.[13] Either single or multiple drug regimens may be prescribed, depending on the severity of the pain. This trend was also observed in our study: Most of the patients sought medical attention due to pain symptoms and most received multiple drug regimens to manage their pain.

Surgery may be a treatment alternative, depending upon factors such as the presenting symptoms, the size of the endometrioma, and childbearing plans. For patients who may wish to become pregnant, the size of the endometrioma and the patients' ovarian reserves will guide the decision.[14] Regardless of the surgical technique used, it has been established that the ovarian reserve decreases following surgical intervention. Patients should be a part of the decision-making process and thoroughly informed, particularly with respect to fertility effects.

In recent years, laparoscopic surgery has largely replaced a laparotomy, which has reduced the length of postoperative hospitalization. This was also observed in this study; on average, the hospital stay was shorter following laparoscopic surgery.[15] It should be kept in mind that endometriosis surgeries can be difficult and are prone to complications. Therefore, the surgery should be performed by an experienced endometriosis team.[16]

A significant limitation of this study is the retrospective design and consequent inability to evaluate the post-treatment status of many of the patients. However, the large number of patients from a single institution was sufficient to convey a center-based clinical report of experience with endometriosis.

CONCLUSION

Despite a long search for a curative treatment for endometriosis, the treatment options have not changed significantly over the years. As surgeons have become more experienced with laparoscopic surgery, it has largely taken the place of a laparotomy in endometriosis surgery. Progestins have gained more importance as a medical treatment option. However, regardless of treatment strategy, long-term treatments and follow-up are still necessary in cases of endometriosis.

Ethics Committee Approval

This study was approved by the Istanbul Kanuni Sultan Suleyman Research and Training Hospital clinical research ethics committee (KAEK/2020.07.130).

Informed Consent

Retrospective study.

Peer-review

Internally peer-reviewed.

Authorship Contributions

Concept: P.Y.B.; Design: P.Y.B.; Supervision: İ.Ö.; Fundings: A.B.; Materials: Z.A.; Data: P.Y.B., Z.A.; Analysis: N.F.T.S.; Literature search: P.Y.B., N.F.T.S.; Writing: P.Y.B., N.F.T.S.; Critical revision: İ.Ö.

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Conflict of Interest

None declared.

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Endometriyozis Takip ve Tedavisinde Üçüncül Merkez Deneyimleri

Amaç: Endometriyozis, üreme çağındaki kadınların %10'unu etkileyen kronik bir hastalıktır. Belirsiz patofizyoloji nedeniyle, küratif bir tedavi seçeneği mevcut değildir. Bu nedenle hastalıkla ilgili klinik deneyim ve artan bilgi birikimi büyük önem taşımaktadır. Bu çalışmanın amacı, uzun dönem klinik stratejileri değerlendirmek için üçüncü basamak bir jinekoloji kliniğinde endometriyozis hastalarının demografik özelliklerini, semptomlarını, tıbbi alımını, analjezik ihtiyacını ve tedavi yöntemlerini araştırmaktır.

Gereç ve Yöntem: Bu geriye dönük tanımlayıcı olgu çalışması, üçüncü basamak bir jinekoloji kliniğinde gerçekleştirildi. Kasım 2012 ile Temmuz 2020 arasında bir veri tabanı araştırması yapıldı ve toplam 1098 hasta çalışmaya dahil edildi. Hastaların yaş, gravite, parite, ameliyat öyküsü ve demografik özellikleri kaydedildi. Tanı yöntemleri, tıbbi ve cerrahi tedavi stratejileri, hastanede kalış süresi ve analjezik ilaç ihtiyacı için medikal dosyalar tarandı.

Bulgular: Sekiz yüz yetmiş üç hasta evre 3 hastalığa sahipken, sadece altı hastaya evre 4 hastalık teşhisi konmuştur. Hastaların %47'si ultrason ile, %53'ü cerrahi olarak teşhis edildi. Hastalar cerrahi tekniklere göre değerlendirildiğinde 144 hastaya laparoskopik, 235 hastaya laparotomi yapıldı. Laparoskopi sonrası ortalama hastanede kalış süresi 2.68±1.02, laparotomi sonrası ortalama süre 3.45±1.69 olarak hesaplandı. Tıbbi tedavi stratejileri açısından kayıtların incelenmesi, 110 hastanın kombine oral kontraseptif (KOK), 36'sının progesteron ve 525'inin dienogest aldığını ortaya koydu.

Sonuç: Endometriyozisin iyileştirici tedavisi için büyük bir arayış bir süredir devam etse de, tedavi seçenekleri yıllar içinde büyük ölçüde değişmedi. Cerrahların tecrübesi arttıkça, endometriyozis cerrahisinde laparotominin yerini laparoskopik cerrahi almıştır. Ayrıca tıbbi tedavi seçenekleri olarak progestinler daha fazla önem kazanmıştır. Bununla birlikte, tedavi stratejilerine bakılmaksızın, endometriyozis hastalarının hala uzun süreli tedavilere ve takiplere ihtiyacı vardır.

Anahtar Sözcükler: Endometriozis; endometriozis cerrahisi; hormon tedavisi; kombine oral kontraseptif; progestin.