

Simplified approach to the treatment of endometriosis – ECO system

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Aim. The aim of the present study was to develop a system to facilitate the approach for patients with endometriosis, mainly for non-specialized gynecologists.

Methods. This was a multicenter study (Canadian Task Force classification II-3). The study aimed to correlate three known parameters for endometriosis, qualifying and quantifying their importance in terms of disease severity and treatment complexity. Patients were divided into three groups.

Results. Each parameter was scored from 0 to 2 in order to determine medical or surgical management for endometriosis based on the clinical and imaging results, where the total score of 0 to 2 was for medical treatment, score 3 was possible medical treatment or surgical and score of 4 to 6 was for surgical intervention. A total score from the three parameters was obtained. Anatomical extent of infiltration and complaints and objective of the patient was helpful in deciding on management of patients with endometriosis.

Conclusion. The ECO system can be a qualified and helpful tool in the approach to patients with suspected endometriosis, mainly for non-specialized gynecologists.

Key words: **Endometriosis - Pain - Infertility.**

Endometriosis is a disease that can cause loss of quality of life in women of child-bearing age, with a prevalence ranging from 12 to 38% of the whole population.^{1,2}

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There are only hypotheses for explaining the pathogenesis of endometriosis, and the patient reports symptoms for 7 to 10 years before diagnosis is made.^{3,4} Although it is known that it is an estrogen-dependent chronic inflammatory process, a definite etiology is not yet known.⁵ Patients may present pain, subfertility or both.^{6,7}

Cyclical pain is the most suggestive symptom of endometriosis, however, in many patients the diagnosis is only made from infertility evaluation.^{8,9}

Although endometriosis may present a variety of signs and symptoms, with different pain complaints and organ involvement, some patients are asymptomatic.¹⁰ The association between the endometriosis stage and the severity of pelvic symptoms is not linear; severe endometriosis can be associated with a few or no complaints at all. Lesions may be incidental findings during surgical approaches for other reasons. A strong association is presented between posterior cul-de-sac lesions and pain during intercourse.¹¹

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TABLE I.—*ECO SYSTEM for approach of patients with endometriosis.*

Parameters	Score	Findings
Extension	0	Peritoneum
	1	Uterus and/or uterine ligaments, ovarian endometrioma \leq 3 cm
	2	Bowel and/or bladder, ureter, ovarian endometrioma $>$ 3 cm
Complaints	0	Asymptomatic
	1	Infertility or no incapacitating pain
	2	Incapacitating pain relating to the affected organs (dyschezia, dyspareunia, dysuria, dysmenorrhea, ...)
Objective	0	No change wanted, accepting the situation
	1	Desiring pregnancy or pain relieve
	2	Desiring pregnancy and pain relieve

Hormonal medications have been used in patients suspected with mild endometriosis, even without surgical diagnosis.^{12, 13} Oral contraceptives, for prolonged periods, may have a protective effect.¹⁴ Because endometriosis affects women of reproductive age, most of them nulliparous, presenting no mild or severe symptoms, the decision regarding treatment modality is important, not only for pain management but also for the endometriosis-associated subfertility.¹³

Decisions regarding timing and the extent of surgery are constant topics for the patients as well as for physician-modulated discussions.¹⁵

The objective of this study was to develop a system to facilitate the decision-making process, a choice of medical or surgical approach that is applicable to patients suspected with endometriosis, mainly for non-specialized gynecologists.

The ECO system represents the initials of three factors (Extension, Complaints and Objective), which will be quantified, scored and applied in mathematical formula.

Materials and methods

The ECO aims are to balance these three variables; extent of disease, complaints and patient's objectives to make the approach more accurate, uniform and less subjective.

We assessed the following three parameters:

1. location and extent of endometriosis lesions;

2. type and severity of symptoms;

3. desire and patient's objective.

The first of these three parameters qualifies the extension of endometriosis' anatomical infiltration, which was called extension. The second one is correlated to the degree of the patient's discomfort and impaired quality of life and is called complaints. The third is based on the desire of the patient at the time of medical decision, the patient's goal, and was named objective.

After qualifying these three factors, each was quantified in three levels, correlating little commitment to a low score and greater commitment to a high score.

Similarly, each factor was measured individually at three levels for representing the degree of severity and difficulty in treatment. Thus, all factors, depending on this assessment, were stratified into level 0, 1 or 2.

The three variables of the ECO system are (Table I) extension, complaints and objective.

Extension

Extension of anatomical infiltration: what is the extension of the endometriosis; where is it located? - What structure or organ is affected?

Evaluating the clinical risk of organ involvement leading to possible functional complaints.

An assessment of the extension of endometriosis is to be obtained by physical examination, using the bimanual vaginal and rectal examination, complementary imaging exams, such as ultrasound and mag-

netic resonance imaging, or others like sigmoidoscopy, cystoscopy, urography and uro-resonance. Assessing the extension of the disease maybe based on a single method or on a combination of them, depending on the routine of each group experience.

The anatomical extension of endometriosis ranges from peritoneum involvement only, to the involvement of other unconnected distant organs such as the bladder, ureter, and bowel.

In case of central disease, involving the uterus and surrounding structures, ligaments and/or ovarian cysts with ≤ 3 cm, it was considered intermediate. When no focus of endometriosis is located or there is only a suspicion of peritoneal endometriosis, the score is 0; when the endometriosis is in the uterus or around it, in the ligaments and/or there is ovarian endometrioma equal or up 3 cm, the score is 1 and when endometriosis extends beyond the uterus, infiltrating bowel, bladder or ureter and/or the ovarian endometrioma involving an area greater than 3 cm, the score is 2.

Complaints

Evaluating complaints, symptoms, quality of life and the patient's potential for coping with the disease.

Complaints from patients are evaluated in the anamnesis. It must be more accurate in relation to pain, especially with respect to the duration and factors that trigger it. The patient should be asked about pain during sex with penetration, defecation and urination. The intensity of pain is an important discriminating factor in this evaluation: in case of incapacitating pain, the level changes. An equally important relationship is applicable if there is infertility treatment.

When the patient is asymptomatic the score is 0; when her complaint is in respect to infertility or no incapacitating pain, the score is 1 and if her complaint is about incapacitating pain related to affected organs (dyschezia, dyspareunia, dysuria, dysmenorrheal), the score is 2.

Objective

To evaluate the primary or secondary desires of the patient and eventually her partner too, including informed and shared consent.

The patient's objective is also identified at the time of anamnesis; it is sometimes best understood during a second interview after endometriosis has been diagnosed.

The gynecologist must know exactly whether the patient can deal with the symptoms, or if she clearly wants pain relief and/or has desire to get pregnant.

When the patient accepts the symptoms and does not want to change the situation, the score is 0, when she desires pregnancy or pain relief, the score is 1 and when she desires both, pregnancy and pain relief, the score is 2.

Discussion

After considering those three factors of intensity and levels of severity as well as complexity, the scores are added (Table II). When scoring ≤ 2 in the ECO-system, the conservative approach might be the best option, while for score ≥ 4 , surgical intervention would be more promising, but when score is 3 the both decision will be possible.

The advantage of this propose is to separate the really clinical approach (score 0 to 2) for to be treat by non-specialized gynec-

TABLE II.—ECO SYSTEM approach.

Score	Approach suggested
0, 1, 2	Conservative (medical treatment)
3	Conservative or surgical treatment
4, 5, 6	Operative laparoscopic surgery

gynecologists, surgical approach (4 to 6) for to be treated by specialized gynecologists and score 3 when more discussion will be done before the decision.

By applying the ECO system it will be possible to indicate surgery, score 4-6, for patients with no extensive endometriosis, however, the decision may be made as a result of clinical condition or the patient's objectives.

No severe or deep endometriosis, with clinical consequences for the patient will have a score lower than 3, which means that medical treatment is safety when is indicated in these cases.

It was observed, from various literatures on this subject that, the discussion about the approach to endometriosis is related to the suspected endometriosis location: peritoneal, ovarian, deep.¹¹ No literature or similar papers were encountered that could be compared with the ECO-system proposal, in which factors other than the endometriosis location are considered for differentiation between medical or surgical treatment.

This study does not ignore the complexity of endometriosis management, multiple options and choices of drug treatment, as well as the variety of controversy over surgical treatment. These, however, were not objectives for developing the ECO-system.

Symptoms, extent of disease and goal of the patient in the clinical approach should be the factors that influence the medical management.

This extended view of patients with endometriosis may be the basis for developing other instruments to facilitate the conduct and the teaching of this complex and serious disease.

The system was inaugurated at three gynecological referral centers for endometriosis with a high number of patients. It facilitates and standardizes the conduct of residents and assistant professors in managing the symptoms described above. We believe the ECO system is a fundamental tool for many professional services, simplifying early diagnosis and differentiation of therapy.

This ECO system may also help gynecologists who are not qualified in complex

endometriosis surgery, supporting decision making when referring the patient to a specialized endometriosis center.

This study does not aim at defining the conduct for the gynecologist. It only indicates the factors and collaborates with their decision making.

Prospective data collection and review may provide a larger clinical base to evaluate this new system.

Conclusions

The ECO system can be a qualified and helpful tool in the approach of patients suspected with endometriosis, mainly for non-specialized gynecologists.

Riassunto

Approccio semplificato al trattamento dell'endometriosi: il sistema ECO

Obiettivo. L'obiettivo di questo studio è stato quello di sviluppare un sistema che facilitasse l'approccio alle pazienti con endometriosi, in particolare da parte dei ginecologi non specializzati.

Metodi. È stato condotto uno studio multicentrico (classificazione II-3 secondo Canadian Task Force). Lo studio si proponeva di mettere in relazione tre parametri noti significativi per l'endometriosi, qualificando e quantificando la loro importanza in termini di severità della malattia e complessità del trattamento. Le pazienti sono state divise in tre gruppi.

Risultati. Ad ogni parametro è stato attribuito un punteggio da 0 a 2 con l'obiettivo di stabilire l'indicazione al trattamento medico o chirurgico dell'endometriosi in base ai dati clinici e ai risultati dell'imaging: un punteggio totale tra 0 e 2 poneva l'indicazione al trattamento medico, un punteggio di 3 consentiva di scegliere il trattamento medico o quello chirurgico, mentre un punteggio tra 4 e 6 poneva l'indicazione al trattamento chirurgico. È stato ottenuto un punteggio totale comprensivo dei tre parametri. L'estensione anatomica dell'infiltrazione, la sintomatologia riferita e l'esame obiettivo della paziente si sono dimostrati utili nella decisione sul trattamento delle pazienti con endometriosi.

Conclusione. Il sistema ECO può essere considerato uno strumento utile e qualificato nell'approccio alle pazienti con sospetta endometriosi, in particolare per i ginecologi non specializzati.

Parole chiave: Endometriosi - Dolore - Infertilità.

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Acknowledgements.—The authors would like to thank to Professor Paulo Cara, Suzana Pessini, Silvana Argollo, Simone Machado and Marcelo Esteves.

Received on January 25, 2012.

Accepted for publication on April 16, 2012.