Case Report

# Regression of an Ovarian Endometrioma with Concomitant Focal Adenomyosis and Deep Infiltrating Endometriosis Following an Integrative Traditional Persian Medicine and Conventional Approach: A Case Report

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## Abstract

**Background:** Ovarian endometrioma, particularly when accompanied by adenomyosis and deep infiltrating endometriosis (DIE), represents one of the most challenging presentations of endometriosis, as it may be refractory to standard hormonal therapies. This case report aimed to describe the effectiveness of a multimodal integrative approach that combined Traditional Persian Medicine (TPM) and conventional medicine in managing a patient with complex endometriosis.

**Case Presentation:** A 41-year-old woman presented with debilitating pelvic pain that prevented her from sitting and severe dysmenorrhea after six months of unsuccessful treatment with dienogest (Verogest). An ovarian cyst had initially been identified during a routine ultrasonographic examination. Approximately four months later, follow-up transvaginal ultrasonography demonstrated a 50-mm left ovarian endometrioma, with findings consistent with focal adenomyosis of the posterior uterine wall and deep endometriosis involving the left ovarian fossa and left uterosacral ligament. Baseline serum level of CA-125 was 95 U/mL. The patient underwent a six-month integrative treatment protocol consisting of continued dienogest therapy alongside standardized TPM oral formulations (Ma'al-Jubn-e Aftimooni powder, Monzej-e-Sawda decoction, Sekanjabin-e-Bozouri syrup, and Itrifal Muqil capsules), topical interventions (Four-Flower sitz bath [Abzan-e Chahar-Gol] and chamomile oil application), and structured lifestyle modifications. One year after integrative treatment initiation, radiological follow-up demonstrated complete resolution of the ovarian endometrioma, complete regression of focal adenomyosis, and disappearance of all DIE lesions. Concurrently, serum CA-125 decreased to 7 U/mL, and clinical remission was observed. Six months after discontinuation of all treatments, follow-up ultrasonography revealed mild structural recurrence, including a 14-mm ovarian cyst and mild bilateral ligament involvement; however, the patient remained completely asymptomatic, without pelvic pain or dysmenorrhea.

**Conclusion:** In this case report, an integrative approach consisting of conventional treatment and Traditional Persian Medicine interventions was associated with significant improvement in clinical, laboratory, and imaging findings. Moreover, the persistence of clinical remission despite mild structural recurrence may suggest a potential role for lifestyle modification and temperament-based interventions in sustaining the therapeutic response. These findings suggest that such an approach may be worthy of consideration as an adjunctive strategy in the management of complex and refractory presentations of endometriosis. Nevertheless, further clinical studies are needed to provide a more precise evaluation of the efficacy and safety of these interventions.

**Keywords:**
Deep Infiltrating Endometriosis
Adenomyosis
Endometrioma
CA-125 Antigen
Integrative Medicine
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## Introduction

Endometriosis is a chronic inflammatory disease frequently associated with chronic pelvic pain and exhibits clinical features similar to those of malignant tumors (1, 2). The disease is associated with infertility in approximately 30%–50% of cases, while ovarian involvement occurs in 17%–44% of patients, resulting in the development of ovarian endometriomas (OEs). These cysts contain dark-colored, blood-stained fluid and are therefore commonly referred to as "chocolate cysts" due to their appearance (3). Among the subtypes of endometriosis, deep infiltrating endometriosis (DIE) is considered one of the most severe forms. It is characterized by lesions extending more than 5 mm beneath the peritoneum and often involves the uterosacral ligaments, rectovaginal septum, and the bowel. In addition, adenomyosis is a uterine disorder characterized by the presence of endometrial tissue within the myometrium and may present in either diffuse or focal forms (4–8). In this context, biomarkers such as carbohydrate antigen 125 (CA-125) play an important role in the diagnosis of endometriosis and the monitoring of therapeutic response, particularly in cases of ovarian endometrioma. Changes in the serum level of this marker may reflect the effectiveness or failure of a therapeutic intervention (2, 9, 10).

Currently, conventional management strategies of these lesions include oral progestins, surgery, and interventions such as ultrasound-guided cyst puncture (UGP) (11). However, these approaches may lack complete efficacy in many cases and may only provide temporary pain relief or partially halt lesion progression. While progestins are among the commonly used treatment options, they may cause adverse effects such as distension, acne, spotting, fluid retention, decreased HDL levels, and an increased risk of thrombosis, prompting patients' interest in complementary approaches (12). In response to this global trend, the World Health Organization (WHO), in its Global Traditional Medicine Strategy 2025–2034, has emphasized the need for education, standardization, regulation, and the safe and effective integration of traditional, complementary, and integrative medicine (TCIM) into health systems (13, 14). Traditional Persian medicine, or Iranian traditional medicine, dating back more than 5,000 years BCE, is one of the oldest medical systems in the world and is based on the theory of temperament and humors (15, 16). Within this framework, integrative approaches that judiciously combine the capacities of modern and traditional medicine may offer a promising strategy for managing complex and chronic diseases (17). The aim of this report is to present a case study of a 41-year-old woman with a large endometrioma with persistent symptoms refractory to dienogest therapy, who experienced significant improvement following an integrative approach combining conventional treatment with the principles of Iranian traditional medicine. Notably, the Iranian traditional medicine protocol used for this patient included preparations containing compounds such as muqil (*Commiphora wightii*), chamomile (*Matricaria chamomilla*), fennel (*Foeniculum vulgare*), lemon balm (*Melissa officinalis*), damask rose (*Rosa damascena*), and other medicinal plants. These preparations were formulated based on the principles of Iranian traditional medicine, and some of their components have been reported in previous studies to possess anti-inflammatory and antioxidant properties and the ability to modulate inflammation-related pathways.

## Case Presentation

The patient was a 41-year-old married woman with a 7-year-old daughter, who held a master's degree and was employed. This case report was approved by the Medical Ethics Committee of Bushehr University of Medical Sciences (IR.BPUMS.REC.1404.152). Informed consent was obtained from the patient for publication of the case report and accompanying images.

The patient was found to have an ovarian cyst during a routine ultrasonographic examination. At that time, she was asymptomatic, and the only reported symptom was premenstrual spotting. Approximately four months after the initial evaluation, a follow-up ultrasound examination suggested endometriosis, and imaging studies confirmed the presence of a 50-mm endometrioma (chocolate cyst) in the left ovary (**Figure 1**). The patient subsequently received gynecological care, and hormonal therapy with dienogest tablets (Verogest, 2 m) was initiated. After an initial three-month course, a second course of Verogest was prescribed, following transvaginal ultrasonography performed with bowel preparation. At this stage, surgery was also considered as one of the treatment options; however, the patient declined surgical intervention. Therefore, her preference for non-surgical treatment was respected, and medical treatment was continued. In the early stages of the disease, the patient did not experience pain; however, during the first year after diagnosis, she developed severe pelvic pain radiating to the rectum, kidney, and bladder, which became so debilitating that she was unable to sit. To manage the pain, she took three 250-mg mefenamic acid capsules daily for three months.



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Severe dysmenorrhea and a feeling of heaviness in the pelvic region were also among her complaints.

Given the persistence and exacerbation of clinical symptoms despite dienogest therapy and the patient's perception of inadequate symptom control, she presented to an Iranian traditional medicine clinic six months after initiating pharmacological treatment to receive complementary treatment (**Table 1**). Although the patient wished to discontinue Verogest, the ITM practitioner recommended continuing conventional treatment for ethical considerations, to maintain standard treatment and avoid unsupervised discontinuation. Accordingly, an integrative therapeutic approach consisting of continuation of hormonal medication alongside Iranian traditional medicine interventions was initiated and continued for approximately 18 months.

During this period, lifestyle recommendations included going to bed early in the evening, walking regularly for 30–45 minutes daily, engaging in gentle physical activity, and avoiding unhealthy foods, including fast food and processed foods such as sausages and cold cuts, as well as mushrooms, eggplant, and other foods considered to have a *sawdawi* (black-bile-producing) temperament, and increased consumption of foods described in ITM as invigorating such as raisins, figs, grapes, olives, almonds, almond milk, and lamb. During treatment, the patient underwent herbal sitz bath twice weekly and reported adhering to the dietary recommendations and instructions as much as possible. The patient was periodically evaluated by an ITM practitioner every 40 days. During this period, follow-up ultrasonography and gynecological evaluations were performed at intervals of 6–7 months.

At approximately 12 months after initiation of the integrative approach, signs and symptoms, ultrasonographic and laboratory findings had significantly improved. The patient reported no severe symptoms, such as pelvic pain or dysmenorrhea. Moreover, follow-up ultrasonography demonstrated complete resolution of the cyst (**Figure 2**). Serological findings also showed a significant reduction in serum CA-125 levels, decreasing from 95 U/mL to approximately 7 U/mL.

Once the ovarian cyst was no longer detectable on ultrasonography, the patient discontinued her previous treatments. Approximately six months after discontinuation of treatment, follow-up ultrasonography showed a recurrence of the ovarian mass, measuring approximately 14 mm (**Figure 3**). Following this finding on surveillance imaging, the patient returned to the traditional medicine clinic for further evaluation and resumption of preventive interventions, while remaining completely asymptomatic. A summary of the patient's clinical course is presented in **Figure 4**.

## Patient Perspective

The patient described her experience as follows: "After the cyst was diagnosed; despite taking hormonal medication, I did not feel any improvement. Instead, my pelvic pain became so severe that it radiated to my rectum, kidneys, and bladder, and even sitting on a chair became impossible for me. I took three strong painkiller capsules daily and had no hope of returning to a normal life. When I started traditional medicine treatment alongside my medications, I noticed a perceptible reduction in pain intensity during the first few weeks. Gradually, I was able to sit again, perform my daily activities, and care for my family. The most significant change for me was returning to a normal life. Even when part of the cyst recurred six months after discontinuing treatment, I was the one who insisted on restarting the integrative treatment, because during those months when I received both treatments together, I experienced the best state of well-being I had had in several years. I cannot say which treatment was more effective, but the combination of the two approaches was miraculous for me."

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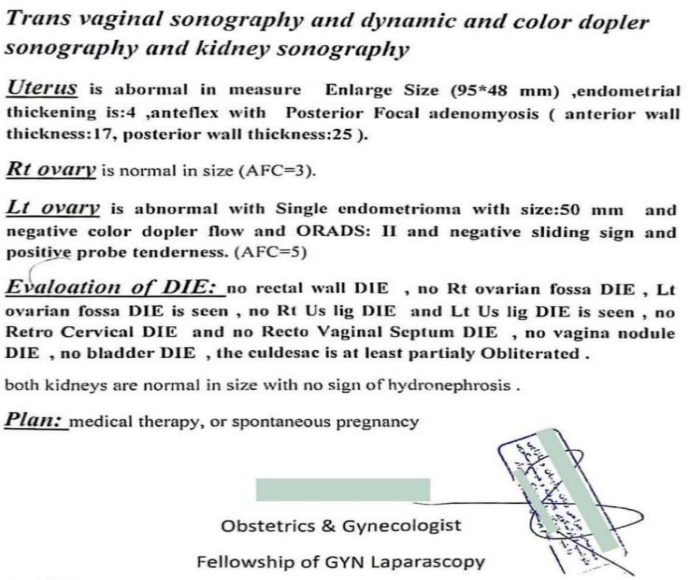



**Fig 1.** Initial transvaginal ultrasonography of the patient.

A 50-mm endometrioma cyst was identified in the left ovary. Findings suggestive of focal adenomyosis were also observed in the posterior uterine wall, with asymmetric wall thickness (25 mm in the posterior wall versus 17 mm in the anterior wall). Additional foci of DIE were identified in the left ovarian fossa and the left uterosacral ligament. The image is reproduced with the patient's consent.

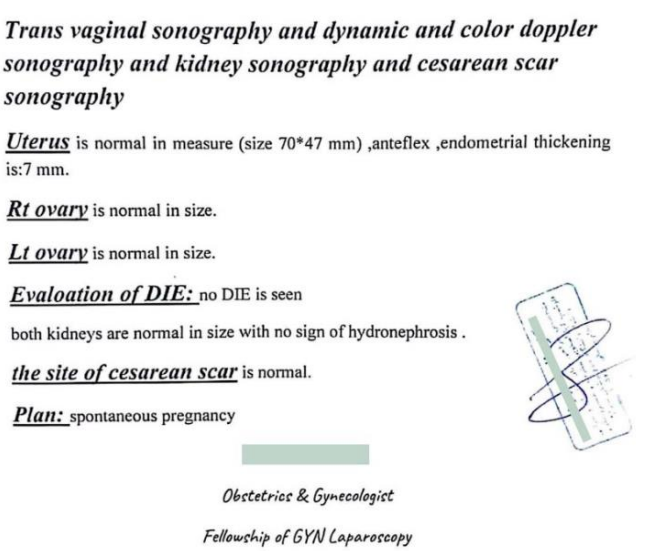


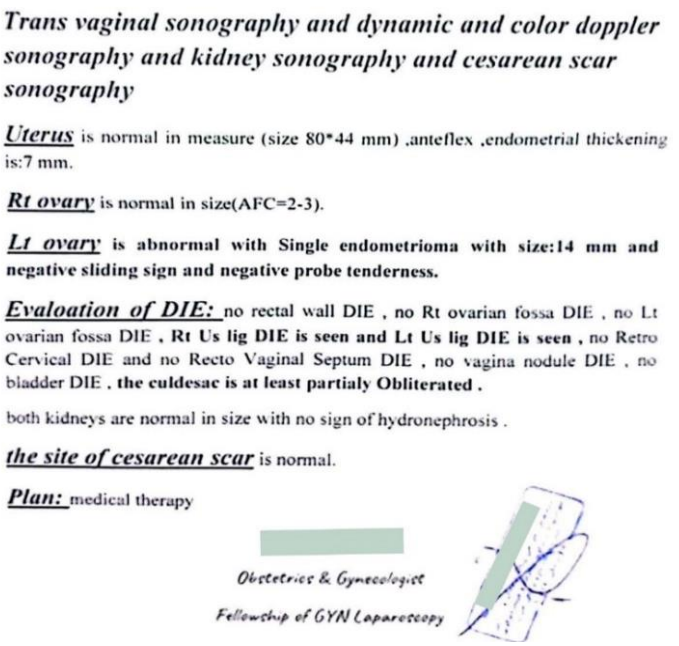

**Fig 2.** Follow-up transvaginal ultrasonography after one year of integrative treatment (Conventional and Traditional Persian Medicine).

The endometrioma cyst was no longer detectable, and the left ovary appeared normal. The uterus returned to its normal dimensions of 70 × 47 mm, and the asymmetry in posterior wall thickness associated with adenomyosis was no longer evident. No sonographically detectable foci of DIE were observed in the uterosacral ligaments or other pelvic regions. These findings suggest radiological regression of the complex disease phenotypes. The image is reproduced with the patient's consent.



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***Trans vaginal sonography and dynamic and color doppler sonography and kidney sonography and cesarean scar sonography***

***Uterus*** is normal in measure (size 80*44 mm) ,anteflex ,endometrial thickening is:7 mm.

***Rt ovary*** is normal in size(AFC=2-3).

***Lt ovary*** **is abnormal with Single endometrioma with size:14 mm and negative sliding sign and negative probe tenderness.**

***Evaloation of DIE:*** no rectal wall DIE , no Rt ovarian fossa DIE , no Lt ovarian fossa DIE , **Rt Us lig DIE is seen and Lt Us lig DIE is seen** , no Retro Cervical DIE and no Recto Vaginal Septum DIE , no vagina nodule DIE , no bladder DIE , **the culdesac is at least partialy Obliterated .**

both kidneys are normal in size with no sign of hydronephrosis .

***the site of cesarean scar*** is normal.

***Plan:*** medical therapy

Obstetrics & Gynecologist

Fellowship of GYN Laparoscopy

**Fig 3.** Follow-up transvaginal ultrasonography six months after complete discontinuation of all treatments.

A 14-mm endometrioma cyst has reappeared in the left ovary. Mild bilateral involvement of the uterosacral ligaments (DIE) is also observed; however, the ovarian fossae and other regions are free of DIE. Notably, despite these imaging findings, the patient remained asymptomatic, with no pelvic pain or dysmenorrhea. The image is reproduced with the patient's consent.

This eighteen-month treatment protocol was administered concurrently with hormonal therapy (dienogest). The compound herbal preparation Itrifal Muqil (containing Muqil, *Terminalia chebula*, and *Phyllanthus emblica*) and Monzej-e-Sawda decoction were prescribed as the main systemic treatments. Topical interventions, including a four-herb Abzan and chamomile oil massage, were also incorporated into the patient's therapeutic regimen.

Table 1. Iranian Traditional Medicine Treatment Protocol Prescribed for the Patient

| Medication/Intervention | Manufacturer /Brand | Composition/Contents | Route of administration | Dose and timing |
|---|---|---|---|---|
| Ma'al-Jubn-e Aftimooni powder | Niak | A combination of fresh cow's milk, grape vinegar, sugar, and Aftimoon (*Cuscuta epithymum*) | Oral, with flixweed and hot water | Every morning on an empty stomach, one sachet (30 g) |
| Monzej-e *Sawda* decoction | Tuba | Lavender (*Lavandula angustifolia*), Aftimoon (*Cuscuta epithymum*), Kashuth, black barberry, marshmallow (*Althaea officinalis*), fennel, fumitory (*Fumaria parviflora*), licorice (*Glycyrrhiza glabra*), Persian Manna, dried fig, Cordia myxa, borage (*Echium amoenum*), Besfayej, seeds and leaves of chicory (*Cichorium intybus*), arabic gum, lemon balm, cleaned raisins, jujube, and | Oral, with Sekanjabin-e-Bozouri syrup | Before lunch and dinner, one sachet (15 g) |



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| | | | | |
|---|---|---|---|---|
| | | Parsiyavashan (*Adiantum capillus-veneris*) | | |
| Sekanjabin-e-Bozouri syrup | Tuba | Fennel seeds and root bark, chicory seeds and root bark, celery seeds (*Apium graveolens*), Khyarain seeds, cucumber seeds, melon seeds, vinegar, water, and red sugar | Oral, with *Monzej-e Sawda* decoction | 15 mL before lunch and dinner |
| Laxative Itrifal Muqil capsules | Niak | Yellow myrobalan, black myrobalan (*Terminalia chebula*), Kabul myrobalan, belleric myrobalan (*Terminalia bellirica*), amlaki (*Phyllanthus emblica*), muqil (*Commiphora wightii*), lavender, Aftimoon (*Cuscuta epithymum*), Turbud (*Operculina turpethum*), and *Cassia fistula* | Oral | Two capsules every evening before bedtime |
| Four-flower sitz bath (Abzan-e Chahar-Gol) | Tuba | Chamomile (*Matricaria chamomilla*), damask rose, mallow (*Malva sylvestris*), and marshmallow (*Althaea officinalis*) | Topical | Twice weekly, 15 minutes each time, on an empty stomach |
| Gol-e-Qand | Tuba | Damask rose and honey | Oral, with Monzej-e-Sawda decoction | One dessert spoon before lunch and dinner |
| Chamomile oil | Tuba | Chamomile (*Matricaria chamomilla*) and sesame oil | Massage of the pubic region | Every evening for 5 minutes on an empty stomach |
| Ovarian-strengthening compound (Ma'jun-e-Taqviyat-e-Tokhmdan) | Kurd Afshari | Saffron (*Crocus sativus*), true hyacinths, cardamom, ziziphora, black cumin, basil seeds, plantain seeds, turnip seeds, nutmeg | Oral | One tablespoon in the evening |
| Nejabal capsules | Sanabel Darou | Lemon balm leaves and red sugar | Oral | One capsule every 12 hours |
| Noma syrup | Sanabel Darou | Aqueous extract of lettuce (*Lactuca sativa*) | Oral | 15 mL every 12 hours |

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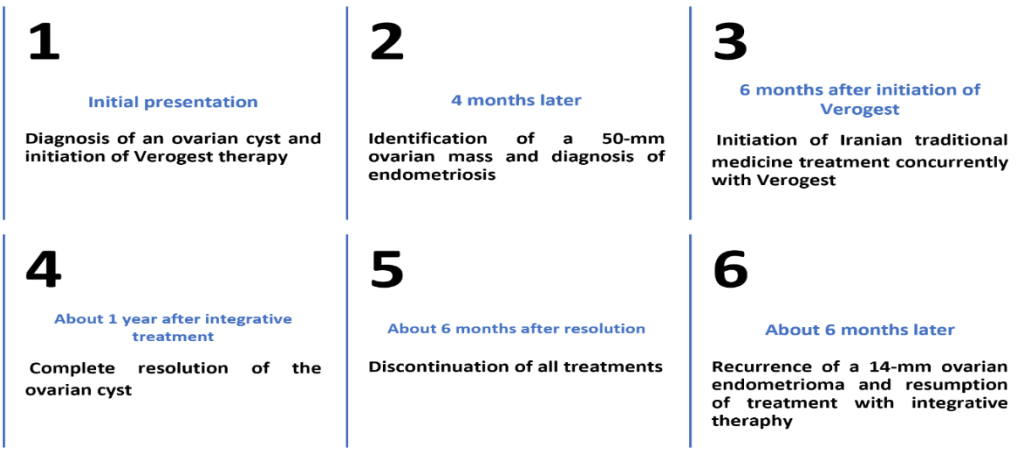



**Fig 4.** Timeline of the patient's clinical course and major therapeutic milestones.

This figure schematically illustrates the 34-month chronology of the patient's diagnostic and therapeutic course. Following the initial diagnosis of an ovarian cyst and initiation of dienogest therapy, a 50-mm endometrioma was identified in month 4. Due to exacerbation of symptoms despite medication use, integrative treatment based on Iranian traditional medicine was initiated in month 10. The major turning point occurred one year after initiation of the integrative treatment, when complete resolution of the cyst was observed, followed by discontinuation of all treatments. The final arrow indicates partial recurrence of the cyst (14 mm) six months after treatment discontinuation, which led to resumption of the integrative protocol. This flowchart provides a concise visualization of the temporal relationship between therapeutic interventions and clinical outcomes.

## Discussion

Endometriosis is a chronic estrogen-dependent disease; accordingly, foods and compounds that can reduce estrogen levels may be beneficial in the treatment of endometriosis (18, 19). From the perspective of Iranian traditional medicine, the clinical manifestations of this patient are consistent with the concepts of uterine swelling (*waram al-rahim*), hard swelling (*waram-e solb*), and menstrual retention (*ehtibas-e tamth*), conditions that are generally associated with the accumulation of abnormal *sawda* (black bile) or thick and cold humors in the pelvic region (20, 21). To address this condition, the patient was initially advised to limit the consumption of foods considered to have a *sawdawi* (black-bile-producing) temperament and to increase the intake of foods considered to be invigorating. In addition, the use of preparations such as Ma'al-Jubn-e Aftimooni powder and Monzej-e-Sawda decoction, which contain herbs such as *Cuscuta epithymum* (Aftimoon) and lavender, was intended to promote the maturation and evacuation of *sawda*, based on their purported properties of resolving, maturing, and purgative effects on *sawda*, thereby facilitating the process of penetration and dispersal of thick humors (22, 23).

The most common symptoms of endometriosis include chronic pelvic pain, particularly dysmenorrhea, dyspareunia, and infertility, all of which can negatively affect patients' quality of life (18). Studies have shown that the coexistence of DIE with posterior focal adenomyosis may be associated with greater symptom severity, including persistent pelvic pain, reduced quality of life, and a poor response to standard hormonal therapies (24). In the reported patient, severe pelvic pain gradually developed and radiated to the rectum, kidneys, and bladder, to the extent that the patient was unable to sit. Accordingly, preparations containing lavender and Haritaki (*Terminalia chebula*) were prescribed, which have been reported in contemporary studies to have analgesic and anxiety-reducing effects (25, 26). In addition, topical massage with chamomile oil was administered for the patient. Available evidence suggests that the use of chamomile-based preparations, including chamomile oil and topical massage, may serve as a safe and effective complementary approach for reducing pelvic pain, particularly dysmenorrhea, and may improve patients' symptoms (27).

The treatment of endometriosis is generally divided into two main categories: pharmacological and surgical



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treatments. Common medications used to treat endometriosis include oral contraceptives, progestins, danazol, and GnRH agonists such as Decapeptyl (28). However, the limitations of conventional treatments and the adverse effects associated with long-term use, such as acne, hot flashes, and weight gain, have led to increasing attention in recent years toward herbal medicines with anti-inflammatory, antioxidant, antiproliferative, and analgesic properties for the management of endometriosis (29).

In this study, medicinal plants, including muqil (*Commiphora wightii*) and chamomile (*Matricaria chamomilla*), were also used according to the principles of Iranian traditional medicine. Modern evidence indicates that the active compounds of muqil, particularly E- and Z-guggulsterone, possess antiproliferative and apoptosis-inducing effects, which may represent a potential mechanism underlying the regression of deep endometriotic lesions. In addition, the use of Itrifal Muqil capsules, containing Haritaki (*Terminalia chebula*), Bibhitaki (*Terminalia bellirica*), and Amalaki (*Phyllanthus emblica*), was recommended in this study. Research has shown that these compounds possess anti-inflammatory and antioxidant properties (30–32).

In addition to the effects of muqil and chamomile, the notable clinical effects of this therapeutic protocol may be attributable to the synergistic effects of other polyherbal formulations used in the patient's preparations, such as fennel (*Foeniculum vulgare*), lemon balm (*Melissa officinalis*), damask rose (*Rosa damascena*), and *Cuscuta epithymum* (Aftimoon), whose anti-inflammatory, antioxidant, and inflammation-modulating properties have previously been reported in various models (29, 33).

Nevertheless, it should be noted that although herbal preparations used in traditional medicine are generally considered safe, their use may be associated with adverse effects such as gastrointestinal disturbances, nausea, diarrhea, headache, dizziness, or allergic reactions. In rare instances, hepatotoxicity or nephrotoxicity, coagulation abnormalities, and clinically significant herb–drug interactions may also occur. Therefore, the use of these compounds in patients with hepatic or renal disease, coagulation disorders, those taking anticoagulant medications, pregnant or breastfeeding women, and individuals with a history of drug or herbal allergies should be undertaken with caution and under appropriate clinical monitoring (33, 34). No significant adverse effects were reported in the present case; however, in the event of disease recurrence, re-initiation of treatment should only be considered after repeating clinical evaluation, assessment of potential drug interactions, and safety monitoring.

In addition to oral administration, according to the findings of Vakilinia et al., the use of medicinal plants in the form of herbal baths (Abzan) may contribute to achieving better therapeutic outcomes; this approach was also employed in the present study (35).

On the other hand, disease recurrence may occur after discontinuation of treatment (36). In this study, although recurrence of the cyst with a size of 14 mm occurred after discontinuation of both traditional and conventional pharmacological treatments, the patient had no symptoms such as pain. This may indicate sustained symptom control after treatment cessation, which may be attributable to the long-term effects of lifestyle modification and maintenance of temperament balance from the perspective of Traditional Persian Medicine.

Finally, given that approximately 80% of the world's population uses traditional medicine in some form (29), integrative treatments in other traditional medical systems, such as Traditional Chinese Medicine (TCM), have also been investigated. Accordingly, the combined use of medications such as dienogest (DNG) and herbal medicines in TCM has shown promising results in recent trials in reducing the symptoms and size of endometriotic cysts (37).

## Limitations and Recommendations

This study has several limitations that preclude drawing a definitive causal relationship or generalizing these findings to a broader patient population. First, the patient simultaneously received dienogest, several herbal preparations, lifestyle modifications, and some topical interventions. Therefore, given the case report design and the overlap among interventions, it is not possible to determine with certainty which component contributed most to the improvement in symptoms and regression of the lesions. Second, the proposed mechanisms of action of herbs such as myrrh, chamomile, fennel, lemon balm, and other components of this protocol are based on previous studies and preclinical data and were not directly measured or demonstrated in this patient. Therefore, these explanations should be regarded as evidence-based hypotheses. Accordingly, future studies with controlled designs, larger sample sizes, and direct clinical and laboratory assessments are recommended to determine the precise contribution of each intervention, establish causal relationships, and elucidate the potential mechanisms underlying this integrative approach.



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## Conclusion

The findings of this case report suggest that a treatment approach based on Iranian traditional medicine, alongside conventional medical treatments, may be associated with improvements in symptoms related to ovarian endometriosis, including severe pelvic pain and dysmenorrhea, as well as a reduction in endometrioma size. This approach may be considered a complementary option, particularly for women seeking non-surgical treatments. However, clinical studies with larger sample sizes and long-term follow-up are necessary to accurately determine the efficacy, safety, and durability of the outcomes.

This case report illustrates a temporal association between a multimodal integrative treatment approach combining conventional hormonal therapy and Traditional Persian Medicine and improvement in symptoms and sonographic findings. However, because multiple pharmacologic, herbal, lifestyle, and topical interventions were administered concurrently, the contribution of any individual component and any causal relationship cannot be established. The findings are hypothesis-generating and warrant prospective evaluation of efficacy, safety, and durability.

## Conflict of Interest

The authors declare no conflict of interest.

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