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Targeted Therapy, Tangible Relief: Elagolix in Deep Infiltrating Endometriosis - A Case Series

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Abstract: ***Background*: Deep infiltrating endometriosis (DIE) is a severe form of endometriosis associated with chronic pelvic pain, dysmenorrhea, dyspareunia, infertility, and significant impairment in quality of life. Available medical therapies often provide symptomatic relief but are limited by side effects and recurrence. *Objective*: To evaluate the effectiveness of Elagolix, an oral gonadotropin-releasing hormone (GnRH) antagonist for symptomatic relief for patients with deep infiltrating endometriosis. *Methods*: This case series included three patients diagnosed with deep infiltrating endometriosis. Pain severity was assessed using the Visual Analog Scale (VAS) before treatment and after three months of therapy. *Results*: All three patients demonstrated significant improvement in chronic pelvic pain, dysmenorrhea, dyspareunia, and overall quality of life. The mean VAS score decreased from 8.67 before treatment to 1.83 after three months of Elagolix therapy. *Conclusion*: Elagolix is an effective and well-tolerated non-surgical treatment option for symptomatic deep infiltrating endometriosis, offering significant reduction in pain and improvement in quality of life.***

Keywords: Endometriosis, Elagolix, Chronic pelvic pain, Dysmenorrhea, Dyspareunia

1. Introduction

Endometriosis is defined as the presence of endometrial glands and stroma outside the uterine cavity. Although benign, it exhibits invasive characteristics such as infiltration of surrounding tissues and high recurrence rates. It significantly impacts women's quality of life due to chronic pelvic pain and infertility (1, 2).

Deep infiltrating endometriosis (DIE) refers to lesions infiltrating more than 5 mm into pelvic tissues (1). Patients commonly present with chronic pelvic pain, dysmenorrhea, dyspareunia, infertility, and urological or bowel symptoms.

First-line medical treatment includes nonsteroidal anti-inflammatory drugs (NSAIDs) and combined oral contraceptive pills. Second-line therapies include progestins and aromatase inhibitors, while third-line treatment involves GnRH agonists. However, these therapies are often associated with adverse effects such as bone mineral density loss and recurrence.

Elagolix is a novel oral GnRH antagonist approved by the U.S. Food and Drug Administration in July 2018 for endometriosis-associated pain (3). It competitively binds to GnRH receptors, suppresses gonadotropin secretion, reduces estrogen levels, and decreases proliferation of endometriotic tissue (3,4). This case series evaluates the effectiveness of Elagolix in patients with deep infiltrating endometriosis.

2. Materials and Methods

This case series included three patients diagnosed clinically and radiologically with deep infiltrating endometriosis.
Inclusion Criteria:

- Symptomatic deep infiltrating endometriosis
- Chronic pelvic pain and/or dysmenorrhea
- Patients opting for medical management or awaiting surgery

Endometriosis Severity Assessment
Severity of endometriosis was graded using the **revised American Society for Reproductive Medicine (rASRM) classification** based on clinical examination and MRI findings. The rASRM scoring system categorizes disease severity into **Stage I (minimal), Stage II (mild), Stage III (moderate),** and **Stage IV (severe)** based on lesion size, ovarian involvement, adhesions, and pouch of Douglas obliteration (1,2).

Patient 1:
Clinical examination revealed a normal-sized anteverted uterus with bilateral forniceal tenderness and a free pouch of Douglas. MRI demonstrated bilateral ovarian endometriosis with thickening of the right uterosacral ligament. Based on bilateral ovarian endometriotic lesions without pouch of Douglas obliteration, the estimated rASRM score was 8–12, corresponding to **Stage II (mild) endometriosis**.

Patient 2:
The uterus was enlarged to 12–14 weeks size with pouch of Douglas fullness and left fornix tenderness. MRI revealed a 'question-mark' shaped uterus, right ovarian endometrioma

measuring 1.5 cm adherent to the posterior surface of the right uterosacral ligament, and left ovarian endometrioma. Bilateral ovarian involvement with adhesions suggested moderate disease, with an estimated rASRM score of 18–24, corresponding to **Stage III (moderate) endometriosis**.

Patient 3:
Clinical examination showed a bulky uterus, pouch of Douglas fullness, and left fornix tenderness. MRI demonstrated deep infiltrating endometriosis with bilateral ovarian endometriosis and "kissing ovaries," indicating dense adhesions and cul-de-sac involvement. The estimated rASRM score was >40, corresponding to **Stage IV (severe) endometriosis**.

Patient	Estimated rASRM Score	Stage	Severity
1	8–12	Stage II	Mild
2	18–24	Stage III	Moderate
3	>40	Stage IV	Severe

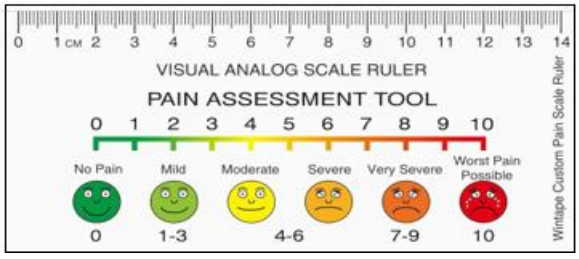
Intervention:
All patients were started on Elagolix therapy and followed for three months along with calcium supplements.

Pain Assessment:
Pain severity was assessed using the Visual Analog Scale (VAS), a 10-cm scale ranging from 0 (no pain) to 10 (worst imaginable pain) (5). Scores were recorded before initiation of therapy and after three months of treatment. Improvement in dysmenorrhea, dyspareunia, chronic pelvic pain, and quality of life was also assessed using a structured questionnaire.

3. Results

All three patients demonstrated significant symptomatic improvement following treatment with Elagolix.

Pain severity assessed using the Visual Analog Scale (VAS) showed marked reduction.



Patient 1: VAS before 8, after 2 (reduction 6)

Patient 2: VAS before 8, after 2 (reduction 6)

Patient 3: VAS before 10, after 1.5 (reduction 8.5)

Patient	VAS Before Elagolix	VAS After Elagolix	Reduction
1	8	2	6
2	8	2	6
3	10	1.5	8.5

Mean VAS score before treatment was 8.67, which decreased to 1.83 after three months of therapy, showing a mean reduction of 6.84 points.

All patients also reported improvement in chronic pelvic pain, dysmenorrhea, dyspareunia, and quality of life.

4. Discussion

The significant reduction in Visual Analog Scale (VAS) scores in this case series demonstrates the effectiveness of Elagolix in managing symptoms of deep infiltrating endometriosis. These findings are consistent with previously published studies (3,4). Taylor et al. reported significant reduction in dysmenorrhea and non-menstrual pelvic pain with Elagolix therapy (3). Similarly, Agarwal et al. demonstrated improvement in health-related quality of life among patients treated with Elagolix (4).

In this series, all patients showed meaningful symptomatic improvement, particularly in pelvic pain and dysmenorrhea. Although deep infiltrating lesions may persist radiologically, clinical improvement was substantial, emphasizing symptom relief as a primary therapeutic goal.

For patient 1 and patient 2 there was significant improvement after stopping the 3 months elagolix therapy.

In patient 3, Elagolix therapy along with calcium was extended for 6 months, followed by a single intrauterine insemination (IUI) cycle, resulting in conception and delivery of a healthy female child in February 2026.

Elagolix serves as a valuable non-surgical option, particularly in patients awaiting surgery, refusing surgery, or requiring symptom control before fertility planning. The drug was well tolerated in all patients.

5. Conclusion

Elagolix offers effective pain relief in deep infiltrating endometriosis with good tolerability, making it a valuable non-surgical option for symptom-driven management. In this case series, Elagolix resulted in significant reduction in pain scores and improvement in quality of life. It may serve as an effective bridging therapy in selected patients.

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