



Comparative Efficacy of Dienogest and Cabergoline in Pain Relief and Size Reduction of Ovarian Endometriomas: A Prospective Study

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ARTICLE INFO	ABSTRACT
Published Online: 15 December 2025	Endometriosis is a condition in which the growth of endometrial tissue occurs outside its typical location (most frequently the ovaries, where endometriomas form). This disease is the main reason for chronic pelvic pain and infertility in women of reproductive age. In this prospective comparative study, 50 women with ultrasound-detected ovarian endometriomas and pelvic pain were enrolled. They were randomly assigned to receive cabergoline 0.5 mg twice a week or dienogest 2 mg once a day for three months. The primary outcomes were changes in endometrioma size and pain scores. After the treatment, dienogest reduced the mean cyst diameter to a greater extent (around 19.7% compared to 8.77% with cabergoline), while cabergoline resulted in a slightly higher average reduction in visual analog scale pain scores (73% compared to 65% with dienogest), but this difference was not statistically significant. Both treatment regimens were generally well tolerated, with only mild and transient adverse effects reported. The results indicate that dienogest could be the drug of choice if the main therapeutic goal is to shrink the endometrioma, whereas cabergoline might be the drug of choice if pain relief and fertility preservation are prioritized. Therefore, larger and longer-term studies are needed to verify these observations.
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I. INTRODUCTION

Endometriosis is a chronic inflammatory disease in which endometrial tissue can be located outside the uterus's natural endometrial chamber. It is a major cause of chronic pelvic pain (CPP) and accounts for 5-10% of women of reproductive age.¹ The most common symptoms are painful menstruation, painful sexual intercourse, painful defecation, and abdominal pain, with 30-50% of women with endometriosis being infertile.^{2,3} The site most frequently involved in endometriosis is the ovary, where they develop endometrioma/Chocolate cysts.

Nezhat et al.⁴ suggest that functioning cysts turn into endometriomas. The source of endometrioma, according to Donnez et al.⁵, is related to metaplasia of invaginated coelomic epithelium. Estrogen and progesterone signaling are impaired in endometriotic tissue,⁶ and this can be brought about by a number of endocrine-disrupting chemicals (EDC).⁷

Endometriosis leads to infertility via different mechanisms. The most devastating abnormality is distortion of pelvic anatomy, which makes ovum pickup and

transportation by the fallopian tubes impossible.⁸ It lowers ovarian reserve, impairs oocyte quality, and reduces the number of mitochondria in oocytes, thus the ability of cell division is decreased. Endometriosis is a disease without a cure and is prone to relapse, however, there is no prophylaxis for the disease. Therefore, the only way to safeguard the ovaries is by stopping the progression of the disease through early diagnosis and treatment. Generally, endometriosis is found within the reproductive age group. Treatment by both medical and surgical means is relatively less complicated if women are older and have completed their families. However, making a decision about treatment options in young adolescent girls is a tough task. The primary goal is to alleviate the symptoms, stop the progression of the disease, and ensure the patient's future fertility. Patients with moderate-to-severe endometriosis, especially those with bilateral endometriomas, witnessed significant declines in serum AMH. Surgery on these endometriomas leads to a further reduction of AMH. A decreased follicular pool is one of the main manifestations of endometriosis.

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Most of the mechanisms for a decreased follicular pool were local and included overstripping of the ovarian cortex, thermal coagulation to stop the bleeding after stripping, and inflammation caused by the surgery. The probability of ovarian failure following bilateral endometrioma surgery was 2.4% as per the report.⁹ After that, the next five ways to preserve fertility have been described. A sixth way is suppressive treatment, which stops the disease and prevents follicular loss due to endometrioma, and a modified surgical approach to minimize follicular loss. Hormonal therapy kills the disease and lightens the load of surgery by stopping the disease at an earlier stage.³ Each hormone relieves the symptoms related to the endometriotic implant and also reduces the growth of the endometriotic implant. Some hormones inhibit follicular growth and ovulation, decrease estrogen production, make the environment hypo-estrogenic, and suppress ectopic endometrial growth. Others directly inhibit the growth of the endometriotic focus. As a result of atrophy of the endometrial focus, women become amenorrheic, thus cyst formation is prevented. In about 70% of women, hormonal treatment is effective and well-tolerated.^{10,11}

The following are the hormones used for endometriosis.

- Combined oral contraceptive pill (COCP)
- Progesterone
- GnRH agonists
- GnRH antagonist
- Aromatase inhibitors
- Cabergoline

In this research, a comparison of the effectiveness of two commonly used hormones has been made – Dienogest (a Progesterone) and Cabergoline (a Dopamine receptor agonist).

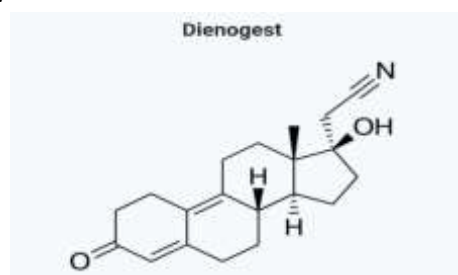


Figure 1: Chemical Structure of Dienogest

Dienogest is a progestin medication that is used in birth control pills and in the treatment of endometriosis.¹² It is also used in menopausal hormone therapy and to treat heavy periods.¹³ Dienogest is a progestin, or a synthetic progestogen. It is a unique progestogen with strong effects in the uterus.¹⁴ The medication has some antiandrogenic activity, which may help to improve androgen-dependent symptoms like acne, and has no other important hormonal activity.¹⁴ Dienogest is approved as a standalone medication for the treatment of endometriosis. It is equally effective as

gonadotropin-releasing hormone agonists (GnRH agonists), such as leuporelin, in the treatment of endometriosis. In safety studies, dienogest has been assessed in women with endometriosis at high doses of as much as 20 mg/day for up to 24 weeks and produced no clinically relevant effects on lipid metabolism, liver enzymes, the coagulatory system, or thyroid metabolism, so it is a relatively safe and well-tolerated drug.¹⁵ Dienogest has been described as a "special" progestogen, possessing low or moderate antigonadotropic efficacy but strong or very strong endometrial efficacy. In relation to its endometrial activity, dienogest is said to be one of the strongest progestogens available. The high endometrial activity of dienogest helps in its use in the treatment of endometriosis. Dienogest may cause side effects such as acne, headache, depression, breast discomfort, abdominal pain, nausea, and vomiting¹⁷.

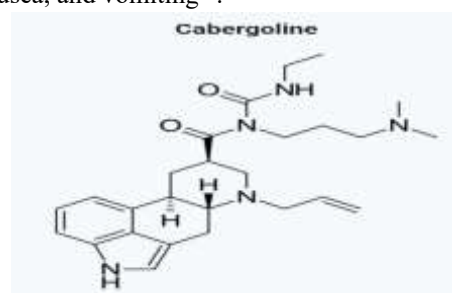


Figure 2: Chemical Structure of Cabergoline

Cabergoline is a dopaminergic medication used in the treatment of high prolactin levels, prolactinomas, Parkinson's disease, and for other indications.¹⁸ Cabergoline is an ergot derivative and a potent dopamine D₂ receptor agonist.¹⁹ It is mainly used in Lactation suppression, Hyperprolactinemia, Parkinsonism, Acromegaly, treatment of Uterine Fibroids,¹⁸ as an adjunct to SSRI antidepressants, OHSS, restless leg syndrome, etc. The development of endometriosis involves interactions between hormonal, immunologic, inflammatory, and proangiogenic processes. Theories hold that endometriotic cells reach the peritoneal cavity via retrograde menstruation, coelomic metaplasia, and lymphatic or vascular metastasis. In order for these cells to get implanted and subsequently develop into endometriosis lesions, these cells must establish a new, adequate blood supply for their formation and maintenance. Angiogenesis and concomitant neurogenesis play a key role in the ectopic implantation of endometrial tissue, its development into endometriosis, and the development of chronic pain.²⁰ Several antiangiogenic agents that target the angiogenesis pathway have been successfully used in animal models of endometriosis. However, these investigative agents can induce severe side effects, including hypertension, hypothyroidism, diarrhea, bleeding events, and hemorrhage, and are teratogens, precluding their use in young and otherwise healthy women. DRD2 agonists inhibit pathologic angiogenesis in tumors by inactivating VEGF receptor 2 (VEGF-R2) signaling.²¹ In contrast to other antiangiogenic

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agents, this type of medication has an acceptable safety profile and does not interfere with the normal establishment and progression of pregnancy. Side effects are allergic reactions like skin rash, itching or hives, swelling of the face, lips, or tongue, breathing problems, chest pain, confusion, hallucinations,²² new or increased gambling urges, sexual urges, uncontrollable spending, binge or compulsive eating, or other urges, persistent cough, swelling of the ankles, feet, hands, unusually weak or tired. all these side effects usually appear in higher dosages, especially when used in the treatment of Parkinsonism and acromegaly, etc.

Pain is commonly reported as the most relevant symptom for endometriosis patients. The ways to measure pain symptoms in clinical trials differ substantially: pain scales used in past and recent endometriosis trials include, among others, the Biberoglu & Behrman Score (B&B), the Visual Analog Scale (VAS), and the numerical rating Scale (NRS). In this study, we used the Biberoglu & Behrman Score (B&B) as it includes the patient's own feelings and clinical evaluation.^{23,24}

A. Pelvic pain		
None	0	
Mild	1 = Occasional pelvic discomfort	
Moderate	2 = Noticeable discomfort for most of the cycle	
Severe	3 = Requires strong analgesics. Persist during cycle when not menstruating	
B. Dysmenorrhea		
None	0	
Mild	1 = Some loss in work efficiency	
Moderate	2 = In bed part of the day, occasional loss of work efficiency	
Severe	3 = In bed one or more days incapacitation	
C. Dyspareunia		Total Pelvic Pain Score (A + B + C)
None	0	None 0
Mild	1 = Tolerated discomfort	Mild 1-3
Moderate	2 = Intercourse painful to the point of causing interdiction	Moderate 4-6
Severe	3 = Avoids intercourse because of pain	Severe 7-9
D. Pelvic tenderness		
None	0	
Mild	1 = Minimal tenderness on palpation	
Moderate	2 = Extensive tenderness on palpation	
Severe	3 = Unable to palpate because of tenderness	
E. Induration		Total Physical Sign Pain Score (D + E)
None	0	None 0
Mild	1 = Uterus freely mobile, induration in the cul-de-sac	Mild 1-2
Moderate	2 = Thickened and indurated adnexa and cul-de-sac, restricted uterine mobility	Moderate 3-4
Severe	3 = Nodular adnexa and cul-de-sac, uterus frequently frozen	Severe 5-6
Total Symptom and Sign Severity score (A + B + C + D + E)		
None	0	
Mild	1-2	
Moderate	3-5	
Severe	6-10	
Very severe	11-15	

Figure 3: Biberoglu & Behrman Score (B&B)²⁵

Endometriosis is a disease that affects 10% of women of reproductive age and is defined as the presence of endometrial-like tissue outside the uterine cavity.²⁶ The extent of the symptoms does not correlate with the severity of the disease, which indicates a complex pathogenic mechanism. Surgery can only treat certain parts of the disease, but due to very high rates of recurrence, it is necessary to use medical therapy and secondary prevention for a long time.²⁷

Present hormonal therapies are aimed at estrogen and progesterone pathways in endometriotic implants. Hormonal contraceptives and progestogens are preferred to GnRH agonists and aromatase inhibitors because of their

better safety profiles.²⁸ Nevertheless, there are only few studies that provide evidence for the effectiveness of hormonal therapies, and thus, in a large number of women, only partial relief of symptoms is achieved. This situation makes it absolutely necessary to find new therapeutic options. The paper by Karshoglu et al. is one of the very few works that point to the potential of cabergoline to locally inhibit angiogenesis in endometriotic implants which may thus represent a new, alternative therapeutic approach. The endometrial tissue is physiologically involved in the regulation of angiogenesis during the menstrual cycle, and available evidence suggests a dysregulation of these mechanisms in the eutopic endometrium of women with endometriosis. Moreover, the ectopic endometrial cells after adhesion and degradation of the extracellular matrix need to induce neoangiogenesis in order to develop the endometriotic implants. The neoangiogenesis is essential for the disease's onset and progression, through different pathways: the increased levels of M2 macrophages as compared to M1 type;²⁹ the overall dysregulation of inflammatory response, favoring Th2 anti-inflammatory response; and the direct ability of endometrial stem progenitor cells to induce angiogenesis by the production of the vascular endothelial growth factor (VEGF). Available evidence showed a positive correlation between the VEGF peritoneal levels and the severity of the disease, with higher expression in active red lesions and deep infiltrating endometriosis. Moreover, the key role of angiogenesis and VEGF binding its receptor type 2 (VEGFR-2) in the pathogenesis of endometriosis was further demonstrated by studies testing antiangiogenic agents, showing a reduction of lesion formation in both *in vitro* and *in vivo* models.²¹ Nevertheless, many of these possible therapeutic options are associated with significant side effects that limit their application in clinical practice.²⁷

In this scenario, cabergoline may represent a medication able to combine the antiangiogenic effect with an adequate safety profile. Dopamine agonists are regularly used for the treatment of hyperprolactinemia and the inhibition of breastfeeding in the puerperium. Moreover, cabergoline is used for the prevention of ovarian hyperstimulation syndrome, where its action was related to the interference with the VEGF pathways by the dephosphorylation of VEGFR. An effect of the dopamine system on the VEGF pathways, and in general on angiogenesis, was further suggested by different pieces of evidence showing an induced angiogenesis by the ablation of peripheral dopaminergic nerves in mice, enhanced angiogenesis in knockout mice for the dopamine receptor 2 (DR2), and *in vitro* studies suggesting that the activation of DR2 induces the internalization of VEGFR2.

The direct effect of cabergoline on endometriosis implants through its effect on angiogenesis was demonstrated in a murine experimental endometriosis model: indeed, the exposure to cabergoline was associated with decreased

number of active lesions, lower cellularity, and significantly less developed vascularization.¹⁸ Moreover, the presence of DR2 was demonstrated in both eutopic and ectopic endometrium,³⁰ and its stimulation by cabergoline was associated to reduced phosphorylation of VEGFR2, to reduced gene and protein expression of VEGF, and to increased level of anti-angiogenetic markers.²⁰

All these pieces of evidence support the potential role of cabergoline for the management of endometriosis, which may represent a possible therapeutic option. Nevertheless, its therapeutic role needs to be further investigated, and the comparison with the other already available therapeutic options appears mandatory both to compare the efficacy and to test a possible synergistic action. Moreover, concerns regarding potential side effects, such as an increased incidence of cardiac valve insufficiency, may suggest the investigation of other non-ergotamine-derived DR2 agonists, although the general safety profile and long clinical experience made cabergoline a drug of interest for further investigation.

II. METHODS

Ovarian cyst surgery is generally recommended for cysts larger than 3 cm (1.5 inches) or when they are causing symptoms, especially if they are persistent or suspected to be cancerous. Smaller cysts, particularly simple follicular or corpus luteum cysts, are often managed with watchful waiting or hormonal contraception. A well-defined research question is critical for the calculation of sample size.

Primary outcome variable

The main outcome variables in this research have been divided into two categories: continuous variables, for example, the change in endometrioma size that is measured in centimeters, and categorical variables, by which we can understand the percentage of women that have experienced a certain level of pain reduction.

Study type

Research studies can be divided into different categories depending on their ideas. A superiority trial is used to show that the first treatment is more effective than the second one. Here, the null hypothesis assumes the same effectiveness, and the alternative hypothesis suggests the superiority of one intervention. On the other hand, a non-inferiority trial is intended to show that a novel treatment is "not worse than" an active control by a certain margin. Such a trial is generally used when the new medicine has the same efficacy but some other advantages like less adverse effects or better tolerability.

Superiority trial with a continuous outcome

This is a common design where the goal is to show one drug reduces endometrioma size more than the other. The standard formula to calculate sample sizes (n) per group is given by

$$n=[2\times(Z_{\alpha/2}+Z_{\beta})^2\times\sigma^2]/d^2 \quad (1)$$

where $Z_{\alpha/2}$ is the critical value of the Normal distribution at $\alpha/2$ (e.g. for a confidence level of 95%, α is 0.05 and the critical value is 1.96), Z_{β} is the critical value of the Normal distribution at β (e.g. for a power of 80%, β is 0.2 and the critical value is 0.84), σ^2 is the population variance, and d is the difference you would like to detect.

Taking reference from previous studies, a minimal sample size was calculated to be at least 18 per group. Initially, 25 patients have been enrolled in each group. after 3 months 23 patients in the Dienogest group and 22 patients in the Cabergoline were found to be consistent and considered for analysis.

The prospective comparative study was carried out in my clinic as OPD basis, from December 2024 to February 2025. The study population included patients with ultrasound-diagnosed endometriomas and pelvic pain. The sample size analyzed for 80% power and alpha 0.5 was 25 in each group. Allowing for a 10% drop out, 25 women were recruited in each group. Inclusion criteria were women, aged between 18 and 40 years, with an endometrioma diagnosed by ultrasound size less than 5cm between (3cm – 5cm) by TVS and associated with pain.

Exclusion criteria included women with known pulmonary, cardiac, renal or hepatic disease, psychiatric disturbance, undiagnosed vaginal bleeding, and a history of any hormonal treatment including contraceptives over the past 6 months.

The patients were counseled regarding the drugs and expected side effects and an informed written consent was taken. Odd number subjects were assigned to group I (cabergoline) and even number subjects were assigned to group II (dienogest). Treatment started from the 1st day of menstruation after the baseline visit and investigations. Cabergoline, 0.5mg tablet twice weekly, was given to group I for 3 months. Dienogest, 2mg tablet daily, was given to group II for the same duration. Followup was scheduled at the end of the first month and at the end of the third month. Pre- and post-treatment assessment of endometrioma sizes was performed by one selected person using the same transvaginal ultrasonography machine. All patients were evaluated for the presence and intensity of pain including dysmenorrhea, dyspareunia, and non-menstrual pelvic pain using the visual analog scale (VAS). The participant was asked to put a tick mark on a point that best described her pain anywhere between 0 indicating “no pain” and 10 indicating “worst possible pain”. This provided an overall pelvic pain score ranging from 0 to 10. Pain score and size of endometrioma were recorded prior to treatment and at end of the first and third months of treatment.

III. RESULTS

The data were analyzed by SPSS (Statistical Package of Social Sciences) version 26. Paired and unpaired t tests were used for the analysis of continuous variables, and

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chi-square test and Fisher's Exact test were used for the analysis of categorical variables within and between groups. All the patients enrolled in the study had Endometrioma. The average initial diameter in the Cabergoline group was 4.22cm, and that of the Dienogest group was 4.37cm. Dysmenorrhoea is the most consistent pain form in all the patients. So, dysmenorrhoea pain has been considered for pain score analysis. Baseline pain score assessment is as follows:

Baseline Characteristics

Table 1: Baseline distribution of VAS pain scores

Group	Patient number	Pain score: 3 - 5	Pain score: 5 - 7	Pain score: 7 - 10
Cabergoline	22	5	8	9
Dienogest	23	4	07	12

Endometrioma Size Reduction

No size reduction analysis has been performed after 1month; it has been estimated after completion of 3 months of treatment.

Table 2: Change in mean endometrioma diameter

Group	Patient number	Initial average diameter	Final average diameter	% reduction	P-value
Cabergoline	22	3.22cm	2.85	8.77	0.000
Dienogest	23	3.37cm	2.51	19.7	

Pain Reduction

VAS again applied for the final pain score in every patient and tabulated in the following table.

Table 3: Direction of change in VAS pain scores

Group	Pain score: 3 – 5			Pain score: 5 - 7			Pain score: 7 - 10		
	↓	≈	↑	↓	≈	↑	↓	≈	↑
Cabergoline	4	1	0	6	2	0	6	3	0
Dienogest	3	1	0	5	2	0	7	5	0

There is no increase in pain in any group. Pain score below the initial score has been taken as a reduction (↓), the same score has been taken as equal (≈), and above the score has been taken as an increase (↑). The percentage reduction is given in the following table.

Table 4: Percentage reduction in VAS pain scores

Group	Pain score : 3 - 5	Pain score : 5 - 7	Pain score : 7 - 10	Average % of reduction	p-value
Cabergoline	4	1	0	8.77	0.000
Dienogest	3	1	0	19.7	

Cabergolin e	80	75	67	73	0.7077
Dienogest	75	71	58	65	

Women on cabergoline in our study reported nausea and vomiting (10%) and headache (4%) after 1 month, but those side effects were no longer observed at the end of study. Side effects in dienogest group included nausea and vomiting (5%), headache (8%), and irregular spotting (22%) after 1 month and nausea, vomiting (2%), headache (4%), and irregular spotting (<10%) after 3 months.

IV. DISCUSSION

This study was a prospective comparison study which decided to compare the effects of cabergoline and dienogest on patients with symptomatic endometrioma. The reduction in the size of endometrioma with cabergoline treatment was less than half of that achieved with dienogest (p-value- 0.000). So with 95% confidence, it can be stated that for size reduction, Dienogest is more effective than Cabergolin. Both cabergoline and dienogest groups experienced a pain reduction that was statistically significant. The mean VAS score after 3 months was lower in women taking cabergoline as compared to those taking dienogest. However, when significance is calculated, the p-value is 0.7077, so with 95% confidence, it cannot be said that dienogest will perform significantly less than cabergoline in this regard.

Only a few studies have addressed the effects of cabergoline and dienogest on women suffering from endometriosis. Various investigators have either studied Cabergoline or Dienogest individually or compared them with other compounds and found that both drugs have similar beneficial effects without producing significant side effects.

Hamid et al. (2014)³¹ conducted a prospective, randomized study including 140 women with endometrioma, divided into two groups as follows. One group comprised 71 patients, all of them receiving cabergoline 0.5mg tablets twice per week for 12 weeks. The other group comprised 69 patients and all of them received LHRH agonist, decapeptyl 3.75mg subcutaneous, single injection, once a month for 3 months. They enrolled 140 women, aged 18–40 years. Hamid et al. (2014) reported a significant reduction in the size of endometrioma in 64.1% of women having cabergoline compared to 21.7% in women having LHRH agonist. Hamid et al. (2014) showed that cabergoline can reduce severe pain equally well as a GnRH agonist.

Kyal et al. (2018)³² conducted a randomized controlled trial on 80 women having pelvic pain due to endometriosis (diagnosed by ultrasound). They were randomized to receive either medroxyprogesterone acetate 10mg (three times daily) or cabergoline (0.5mg twice weekly) for 12 weeks. Pain was measured on a VAS of 0–10 at the beginning and at 1,3,4,6 months. Cabergoline was as

effective as medroxyprogesterone acetate in decreasing pain due to endometriosis and had better compliance and acceptance due to fewer side effects and less frequent dosing.

Our study showed that there was a significant decrease in pain score and a 19.7% percentage reduction in the size of endometrioma in women having Dienogest and 8.77% in the Cabergoline group. The findings are supported by other studies. Park et al. (2016)³³ showed that the size of endometrioma was significantly reduced at 12 months (30.9mm vs 20.8mm) and 18 months (20.5mm vs 14.7mm) of dienogest treatment. It appears that a larger decrease in size is associated with a longer duration of treatment.

Mean reduction in the VAS score between the baseline and after 12 weeks in the full analysis set was 2.74 in the dienogest, whereas in our study it was 1.68. A similar result was reported by Uludag et al. (2021).³⁴ Park et al. (2016)³³ showed that pain was significantly reduced at 12 months after treatment with dienogest. Lang et al. (2018)³⁵ showed that after 24 weeks of treatment with dienogest, the mean reduction in pelvic pain score was statistically significant for dienogest over placebo. These results are consistent with this study.

Novella-Maestre et al. (2009) conducted a study where they implanted human endometrial fragments in the peritoneum of mice and used cabergoline to control the spread of endometriosis. The results showed a significant inhibitory effect of cabergoline on endometriosis spread. With the same concept, Karshioğlu T et al. (2021)³⁶ conducted a study where nude mice whose peritoneum had been implanted with eutopic human endometrial fragments were treated by cabergoline or quinagolide during a 14-day period. Neoangiogenesis was inhibited and the size of active endometriotic lesions, cellular proliferation index, and angiogenic gene expression were significantly reduced by both dopamine agonists when compared to the placebo. The findings explain the reduction in endometriosis-associated pain in women who have cabergoline.

Hamid et al. (2014)³¹ reported nausea in 12.6% and headache in 5.6% of women having cabergoline. Kyal et al. (2018)³² reported nausea in 14.5% women taking cabergoline.

Park et al. (2016)³³ reported side effects in dienogest as nausea 2.1%, headache 1.6%, and irregular bleeding 3.2%. However, the women in their study continued the use of dienogest for 12 months, and side effects were reduced over time. Chandra et al. (2018)³⁷ showed an incidence of irregular bleeding of 15.8% in the dienogest group, which is consistent with our findings.

There was no significant difference in the incidence of nausea, vomiting, and headache between the cabergoline and dienogest groups. Abnormal uterine bleeding was manifested as polymenorrhea in the cabergoline group and as irregular spotting in the dienogest group. Polymenorrhea appears to be

more acceptable than irregular spotting to our population of women.

Mehnaz et al.³⁸ in their study showed reduction of the size of endometrioma is less apparent with cabergoline than with dienogest after 3 months of treatment. Cabergoline yields better results in decreasing pelvic pain compared to dienogest.

The research indicates that cabergoline is just as effective as dienogest in shrinking endometriomas. One of the most important things in the clinical setting is that cabergoline, just like dienogest, can essentially be the first-line medical treatment used to alleviate endometriosis-associated pain. The decrease in size of the endometrioma by cabergoline is not really significant, so it is only logical that cabergoline be the first-line medical therapy in endometriomas cases of 5 cm or less; thus, laparoscopic excision can still be your backup option. The reason for the effectiveness of cabergoline in the management of endometrioma seems to be that it reduces VEGF; thus, it is directly targets the dominant pathophysiology of the endometriosis spread.

V. CONCLUSION

The main purpose of this study was to evaluate the influence of cabergoline and dienogest on the reduction of endometrioma size and pelvic pain. After 3 months of treatment, the reduction of endometrioma size by cabergoline is less evident than that by dienogest. Cabergoline is more effective in reducing pelvic pain than dienogest.

It is possible that cabergoline is a medicine for the alleviation of pain associated with endometriosis and that the side effects are of a low grade, especially in a woman who is planning to get pregnant. An ample number of such studies, with longer duration and more patients, to be carried out at different centers under random conditions, will be necessary, eventually, to determine its effectiveness.

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