

# Outcomes of Using Hormonal Therapy after Surgical Excision of Abdominal Wall Endometriomas

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## Abstract

Endometriosis is a common gynecological pathology with the abdominal wall endometriosis (AWE) being a rarer one but with increasing frequency probably to the increased rate of deliveries by cesarean sections. Endometrial tissue is hormone responsive and its course of pathology can be directly influenced by hormonal therapy. The aim of the study is to evaluate the effect of using adjuvant hormonal therapy post-surgical excision of AWE regarding patient's wellbeing and the recurrence rate. We reviewed the records of our twenty (20) cases operated in a six (6) years period whom were or weren't subjected to postoperative hormonal therapy, comparing their follow up courses and recurrence rates. 20 women in whom 18 women were multiparous (90%), mean age was 30.6 years. The previous surgery was cesarean section in 19 patients (95%) with the main complaint as a cyclic pain and swelling at the site of previous surgery scar. The patients were divided in two groups 10 patients in each, group A included the patients who had surgery alone and group B for the patients who had hormonal therapy for nine months postsurgical excision. No recurrence was reported in each group, 60% of group A patients had localized pain and discomfort at the scar site which started six months post-surgery while this complaint wasn't recorded in any of group B patients. No difference was found in the recurrence rate between the two groups, absence of localized wound symptoms may indicate a better course and less future recurrence rate in the second group in the future. Some prophylactic methods are better to be taken seriously to decrease the rate of this complication.

**Keywords:** Cesarean section, endometriosis, hormonal therapy, recurrence rate.

## INTRODUCTION

Endometriosis by definition is the existence and accretion of endometrial glands and stroma in the outside of the uterine cavity, and when it manifests itself as a circumscribed mass or a cystic lesion filled with blood, will be nominated as Endometrioma (1). According to the site being affected by the pathology, the endometriosis is divided into two types: Internal "adenomyosis and myometrial adenomyosis" and external which is subdivided into genital "genital area and pelvic ligaments" and extragenital "skin, brain, gastrointestinal tract, urinary tract, lungs, and abdominal wall" (2-5). Abdominal wall endometrioma "AWE" is the occurrence of endometrial tissue superficial to the peritoneum with association to a previous obstetric or gynecologic open or laparoscopic procedure and it is termed as scar or incisional endometrioma when it is found in the site of operation incision (6).

While endometriosis may affect 5% - 10% of all women in the reproductive age (7), scar endometrioma has a more rare occurrence as its incidence was reported by many authors to range between 0.03% - 3.5%, with some higher rates being frequently mentioned in some articles even up to 12% (8,9). In spite of the benign nature of endometriosis it has a rare possibility for malignant transformation with 80% of these changes occurring in the ovary leaving the other 20% to be extra gonadal (10), marking the clear cell carcinoma as the most common histotype in a rate of 4.5% (11).

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The endometrial tissue is affected directly by sex hormones so, due to that fact and the always expected possibility of the presence of unnoticeable small foci of the pathology around the main lesions, some references had recommended the use of postoperative adjuvant hormonal therapy to avoid recurrence(12).In the current study we are trying to identify the pros and cons of using the gonadotrophin releasing hormone agonist “ZOLADEX” as a postoperative hormonal therapy after surgical excision of AWE and its effect on the recurrence rate.

## Methods

This is a retrospective analysis of 20 patients that underwent surgery for abdominal wall endometrioma excision at our hospitals during the period from January 2016 to January 2022.In this period of time we had 10 patients treated with surgery alone group (A) and another 10 patients group (B) who had postoperative gonadotrophin releasing hormone agonist “Zoladex” as a single dose every 28 days for 9 months .We compared ; the site of lesion, size, presenting symptoms, postoperative symptoms, and recurrence rate between the two groups. Using the statistical software SPSS version 26, the collected data were analyzed to compare the results of both groups descriptively.

## Results

Mean age was 30.6 years; range (25-39 years), the type of operation was cesarean section in all but one of the patients who had a surgery for uterine myomectomy excision. The presenting symptoms were mainly cyclic pain and swelling at the scar site.18 of the 20 patients were multiparous, all the patients were diagnosed primarily by ultrasound (U/S) examination, seven cases needed magnetic resonance imaging (MRI) in addition, and then all the patients were subjected to fine needle aspiration and cytology examination (FNAC) to confirm the diagnosis. The period between the diagnosis and the last surgical operation ranged from (10) months “minimum” to (28) months “maximum” with an average of (19.25) months. The duration of symptoms before surgical excision was between 3-6 months with exception of one case that had a one year history. All the masses were excised with a clear margin about 1 cm with direct closure of the defect, mesh repair was needed after excision of two of the large masses and the polypropelene mesh was used. All the cases were confirmed by postoperative histopathological examination with the least free margin recorded about 4mm.The largest mass excised was 5\*4\*3cm and the smallest was 2\*2\*1cm.Both patients’ groups were followed up for at least one year postoperatively. No recurrence was recorded in any patient of the two groups. In group (A) surgery only treatment, we had five patients (50%) who experienced mild localized pain at the scar site which started 6 months after the excision surgery. This complaint wasn’t recorded in any patients of the postoperative hormonal therapy group (Table 1).

Table 1: Comparison of study characteristics between the two groups.

Variables		Treatment surgical excision only Group A (N=10)	Treatment surgical excision with hormonal therapy Group B (N=10)
Age (mean)		28.8	32.4
Type of operation	Caesarean section	9	10
	Myomectomy	1	0
Average time of symptoms (months)		17.7(10-26)	20(12-28)
Location of lesion	Scar of CS	9	10
	Scar of myomectomy	1	0
Size of mass(cm)	Largest	4*5*3	3*2*2
	Smallest	2*2*2	2*2*1
Presenting symptoms	Pain & swelling	8	2
	Swelling	1	2
	Pain	1	6
Imaging exam	Us &MRI	3	4

	Us	7	6
<b>Symptoms 6 months after surgery</b>	No symptom	5	/
	Mild pain	5	/
<b>Symptoms after hormonal therapy</b>	Hot flash, sleep disturb	/	2
	Hot flash, vaginal dryness	/	2
	Hot flash	/	4
	Disturb memory	/	1
	Hot flash, hair loss	/	1

## Discussion

From more than three centuries ago endometriosis was known, at the beginning as a gynecological disorder due to functionally active ectopic endometrial cells located outside the uterine cavity and nowadays as a disease of industrialization affecting 10% of young women (13,14). A known pathology of benign nature, although exhibiting a full range features of malignancy like being invasive, locally spreading, with a clear capacity for dissemination. The pathology behind endometriosis may have different explanations, as it is already thought that endometrial cells migrate from the tubes to the peritoneal cavity during menstruation and that these cells should be cleared by the immune system, so the condition may be a defect in the immune response of the body (15). But, as it was reported that endometriosis can occur in distant organs like brain and lung here the most probable explanation is the hematogenous and lymphogenic spread of the endometrial cells to these organs (16). The third explanation is the iatrogenic transplant theory which blames the surgeon hands for transferring the endometrial cells to the site of operation which will grow later due to its affection by hormonal stimuli, this mechanism may explain the higher incidence of AWE following cesarean section (0.2%) in comparison to that occurring following normal vaginal delivery (0.06%)(8).

The usual presentation of AWE is a painful, growing mass at the area of cesarean section with bleeding and skin discoloration with a pathognomonic feature of being cycle related (16). The AWE differential diagnosis includes lipoma, sebaceous cyst, abscess, hematoma, suture granuloma, keloid, dermoid, or malignant tumors (17). So, careful search is mandatory for getting the best results in managing this condition with special regard to diagnostic tools. Ultrasound which is the most commonly used will reveal the lesion as a mass which could be cystic, solid, or heterogeneous (18). When the lesion is more than 4 cm MRI and contrast CT may provide a more precise description as the intralesional bleeding foci could be easily visible (19,20). Also FNAC under US guide could be useful and

inexpensive diagnostic tool which can eliminate the possibility of malignancy, keeping in mind its theoretical potential for puncture site implantation of the pathology (21,22). The use of CA-125 for endometriosis diagnosis and progress monitoring is debatable and was found by some authors to be of no significance (23). Endometriosis could be treated both medically and surgically, the aim of the medical treatment is the relief of symptoms by suppressing the hormonal effects that can lead to enlargement in the lesion, the surgical therapy which is the most effective therapeutically and diagnostically usually considered when the medical therapy fails (24). The procedure should include removing the mass with at least 1 cm of surrounding clear margin which may sometimes indicate the application of mesh prosthesis when managing large lesions to prevent incisional hernias (18,19,25). Our study revealed that 90% of the patients were multiparous, the mean age was 30.6 years which is a bit lower than what was recorded by three other studies which was 34,35, and 36 years respectively (26,27,28). The mean mass size for the largest diameter was 29.5 mm which is higher than what was found in a study by Marras et al which was 24mm(24) and less than what Song et al had reported as 32mm(26) and Hasan et al as 42mm(27). The time recorded from uterine surgery to the onset of symptoms is ranging from few months to more than 17 years with average of 30 months(29-31). We had found that 19.25 months is the average period in our study which is less than average and less than what was recorded by another two studies which was 5.93 years and 4.61 years (26,27). Using hormonal therapy alone as a treatment for endometriosis had proved limited effectivity and was associated with immediate recurrence upon cessation of medications, although the use of hormonal therapy as an adjuvant post resection modality was advised by some authors for the recurrent AWE cases particularly if associated with concomitant pelvic endometriosis(32,33), and it was found that this combined management had decreased the recurrence rate from 42.9% to 11%(34,35). In our study we didn't record any recurrence in both groups, but we had noticed that the surgery only group had 50% of its patients suffering from localized mild pain at the scar site, while the combined therapy group patients hadn't record this

complaint, which may give an indication that these localized symptoms may be a precursor of future recurrence. The rarity of the cases is a clear cause of shortage regarding results conclusion. Regarding that with the consideration of the unwanted signs and symptoms inflicted by the hormonal therapy, we think that the forms and against of this treatment modality should be carefully weighed.

## Conclusion

preventive measures like protecting the surgical margins, thorough wash of the abdominal cavity post uterine surgery, dislocation of the uterus outside the pelvic cavity, never using the same sutures for the closure of the uterus and other abdominal wall planes and attention on delivering placenta to avoid contaminating the abdominal wall wound after cesarean section is thought to be beneficial in avoiding this type of complications. No difference in recurrence rate was found between the two groups but the use of hormonal therapy postoperatively was found to render the patient on a better course. Larger studies still needed to get more accurate conclusions.

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