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## Ovarian Endometriotic Cyst in an Unmarried Mimicking Malignancy: Case Report and A Review of the Literature.

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### ABSTRACT

Ovarian Endometriotic cysts, common though, rarely assume massive sizes, Malignant transformation was a rare complication of endometriosis. The detection of pelvic mass with associated raised CA 125 level is highly suspicious for ovarian malignancy, but there were various other benign pelvic pathologies that mimic the above findings, especially in perimenopausal women in the Indian subcontinent as seen in our case .We report a case of huge endometriotic cyst mimicking an ovarian neoplasm.

**Keywords:** endometriotic cyst, carcinoma ovary, magnetic resonance imaging

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## INTRODUCTION

Endometriosis defined as the presence of functioning endometrial glands and stroma outside the uterine cavity was first described in 1860 by von Rokitansky. Endometriosis is a common gynecological condition and the prevalence is about 10 percent. On the other hand, endometriotic cysts have drawn attention as a potential source of ovarian carcinomas especially adenocarcinoma at the endometriotic site. Recently, endometriosis has been reported to be associated with an increased risk of epithelial ovarian cancer, especially clear cell carcinoma and endometrioid carcinoma along with adenocarcinoma. There is molecular, biological, and epidemiological evidence to suggest an association between endometriosis and ovarian cancer, which has an estimated prevalence of 0.3-0.8% in our country. Several clinical and imaging risk factors had been reported, such as age greater than 45 years, large cyst size, lack of shading and lobulation on MRI, and so on. Of these findings, enhancement of mural nodules seems to be the most valuable imaging finding, but benign conditions with this finding had also been reported and as these findings may lead to suspicion of ovarian malignancy but only confirmed by laparotomy as in our case.

## CASE REPORT

A perimenopausal (44years) unmarried woman, was admitted with a history of 5 months of amenorrhea followed by excessive bleeding per vagina for 3 days, also had h/o pain in the Right iliac fossa, vomiting, malaise. Her menstrual history was normal before 5 months. General examination showed anemic, B/L eyes- exophthalmoses, thyroid and breast normal. Abdominal examination revealed an abdomino pelvic mass of about 14-16 week gravid uterus size, cystic to firm in consistency, tenderness in the right iliac fossa present, no guarding, no rigidity seen. L/E – bleeding pervagina present. Her Hb-5gms, CA 125 values > 600 U/ml raised markedly, USG shows uterus bulky with multiple fibroids, A thick walled multiloculated/multiseptated cystic lesions of 13.7\*3\*11.7 in the right adnexa. Internal echoes and debris noted within, minimal/ nil vascularity. Minimal free fluid in POD. MRI shows right adnexal complex ovarian cyst more likely than neoplastic cystic ovarian lesion with lobulated margin. Also small left ovarian endometriotic cyst. Liver, Kidney, Spleen were found to be normal. No abnormal lymph node was seen. Pre operatively anaemia corrected with 4 units of PC. Laparotomy with right paramedian incision, abdomen opened, minimal peritoneal fluid, uterus enlarged in size, an irregular multiloculated cyst containing mucinous and endometriotic fluid in the right adnexa, cyst was adherent to posterior surface of uterus and to the serosa of the large bowel, the same released by sharp dissection and the cyst excised carefully and gradually. TAH with BSO done. Peritoneal washings taken. Omental biopsy taken. Patients received 2 units of packed cell transfusion intraoperatively. Post operative period not eventful. Histopathology of excised cyst revealed right ovarian endometriotic cyst with cyst wall – simple serous cyst. Omental tissue normal and myometrium leiomyomata. No malignant cells were seen. Post surgery CA 125 levels reduced to 48.8 U/ml. She is on regular follow up and symptom free [1-14].

## DISCUSSION

Endometriosis is defined as the presence of functioning uterine glands and stroma in any site outside the uterus. The condition was one of the unusual interest and although it gives rise to tumour formation, it is not mostly a neoplasm. This does not mean that ectopic endometrium cannot occasionally be the site for the development of a malignant growth, although this is also uncommon. The disease occurs in the two forms- extra uterine organs and tissues and also in the uterine wall. Although true nature of the lesion was recognized towards the end of the 19<sup>th</sup> century, it is only during the last 50 years that proper attention has been paid by the gynaecologist to the condition. Ectopic endometrium also resembles the uterine mucosa wherever it is soiled, in that it is subservient to ovarian hormones. It typically proliferates when the ovaries are active and atrophies after menopause and during pregnancy, its stromal cells exhibit decidual reaction. The possibility of adenocarcinoma or other malignant disease arising in an island of endometriosis is no longer disputed in recent studies. But, A woman who had had endometriosis of the abdominal wall for at least 10 years, during which time the lesion was proved to be benign by repeated biopsy, ultimately died from adenocarcinoma at this site is also seen. Similar developments were reported in endometriosis of the rectovaginal septum, ovaries, bowel and cervix, and in uterine adenomyosis.



## AETIOLOGY

**Inheritance:** Endometriosis has a family history in many patients. Mendelian inheritance pattern had been identified and multifactorial inheritance has been postulated.

**Age:** Active endometriosis is seen commonly between the ages of 30 and 40 years of life.

**Social and Economic Factors:** Endometriosis, earlier was more common among highly civilized communities and among their well-to-do members, therefore described as “a disease of the rich”, but which is now a disease of all groups.

**Parity:** Fifty to seventy percent of affected women are childless, contributing to major cause for infertility and vice versa; many of the others have had only one or two pregnancies and those a long time previously.

**Retroversion:** Extra uterine endometriosis is often found with retroversion and it may be that the displacement of the uterus is an a etiological factor in which it favours retrograde menstruation

## RISK FACTORS

- Late marriages
- Late child bearing
- Genital tract obstruction
- Frequent and prolonged menstrual cycles
- Nulliparity
- Early menarche

## SITES:

Endometriosis can occur anywhere in the body, even in the tissues of the arm, leg, pleura, lungs, diaphragm and kidney, but very rarely seen in these areas.

**Ovary:** The ovary is the most commonest site and is involved in 30–40% of cases. The lesion is nearly and always bilateral. It sometimes appears in the form of multiple “burnt match head” spots on the surface of the ovary, and sometimes as the typical tarry cysts in a disorganised ovary surrounded by dense adhesions. It should be noted, however, that not all “tarry cysts” in the ovaries are endometriotic cyst though. Any cyst containing old blood can present a similar naked-eye appearance during procedure. An endometriotic cyst can reach the size of a fetal head but is rarely larger and seen rarely. It is usually impossible to remove the cyst intact from its adhesions because the presence of these is a sign that the cyst wall has already been breached.

### Pelvic Peritoneum Including the Uterovesical Pouch and the Pouch of Douglas

The peritoneum of the pouch of Douglas is the second commonest site and a lesion there is often associated with ovaries.

### Outer Coat of Uterus

Endometriosis of the ovary, pelvic peritoneum and associated ligaments, when adherent to the uterus, often invades the outercoat of the uterus.

### Round Ligament, Uterosacral Ligament and Rectovaginal Septum

Endometriosis can also involve the round ligament in either its pelvic or inguinal canal portion but seen rarely.

**Fallopian Tube:** Endometriosis of the outer surface of the fallopian tube occurs as part of peritoneal endometriosis and causes for infertility in majority of the cases.

**Intestine:**

The rectum and pelvic colon can be observed by invasion from peritoneal and ovarian deposits or by seeding in the above mentioned organs.

**Mechanism of Origin:**

There are many theories have been postulated according to the sites of endometriosis and are given in the below table.

**Table no :1**

<b>Site</b>	<b>Theory</b>
Pelvic endometriosis	Retrograde menstruation
Pelvic peritoneum	Coelomic metaplasia
Abdominal viscera Rectovaginal septum umbilicus	Coelomic metaplasia
Abdominal scar Episiotomy scar Vagina and cervix	Direct implantation
Lymph nodes	Lymphatic spread
Others (lungs, pleura, skin)	Vascular Genetic Immunologic

**Symptoms**

Surprisingly, there may be no symptoms in few patients, even when the endometriosis is widespread and advanced stages. The five “Ds”:Dysmenorrhoea, Disorders of menstruation, Dysparunia, Dyschezia and Dull ache of abdomen are the common symptoms heard. Infertility is a major problem with endometriosis.

**Diagnosis**

Diagnosis are mainly made by laparoscopically with the “powderburn”lesions on the peritoneal surface. Larger cysts including endometriomas which are usually less than 12 cm in diameter. Histological confirmation should always be done.

Ultrasound , CT scan or MRI scan can be used only as an additional diagnostic modalities but always better to get it in order before going for laparotomy. CA-125, an important marker for ovarian epithelial cancer, is found to be raised in endometriosis although the levels are lower than they are seen in ovarian cancer.



**Fig no :1**  
 Ultrasound pictures of endometriotic cyst which shows fine stippling inside ovary (ground glass appearance)

**STAGES:**

For the better understanding of the disease and treatment the American society for reproductive medicine has provided the classification of endometriosis..The stages of endometriosis is given below the table.

**Table no:2**

**American society for reproductive medicine revised classification of endometriosis**

Stage I (Minimal)	1-5			
Stage II (Mild)	6-15			
Stage III (Moderate)	16-40			
Stage IV (Severe)	> 40			
Total	Prognosis			
Ovary peritoneum	Endometriosis	<1 cm	1-3 cm	> 3 cm
	Superficial	1	2	4
	Deep	2	4	6
	R Superficial	1	2	4
	Deep	4	16	20
	L Superficial	1	2	4
	Deep	4	16	20
Tube Ovary	Posterior cul-de-sac obliteration adhesions	Partial	Complete	
		4		40
		<1/3 enclosure	1/3-2/3 enclosure	> 2/3 enclosure
	R Filmy	1	2	4
	Dense	4	8	16
	L Filmy	2	4	4
	Dense	4	8	16
	R Filmy	1	2	4
	Dense	4	8	16
	L Filmy	1	2	4

If the fimbriated end of the fallopian tube is completely enclosed, change the point assignment to 16.  
 Reprinted by permission from the American Society for Reproductive Medicine. Fertility and Sterility 1997;67(5):819.

**CONCLUSION**

In literature patients with huge adnexal masses with massive peritoneal fluid in ultrasound and elevated levels of serum CA 125 above 600nmg have been rarely reported as endometrioma . In our case we report 44 year-old unmarried women with huge right adnexal mass with peritoneal free fluid and

elevated levels of serum CA125 who was operated with high suspicion of ovarian malignancy. The exact diagnosis was endometrioma and confirmed after histopathological report. In conclusion, we always should keep in mind endometriosis as differential diagnosis in perimenopausal women with large adnexal mass and unusually elevated serum ovarian tumor markers.

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