

# Myometrial Cyst in a Term Pregnant Woman: A Rare Case Report and Review of Literature

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**Abstract:** Myometrial cysts are rare uterine lesions, most commonly associated with adenomyosis or cystic degeneration of leiomyomas. Their occurrence during pregnancy is extremely uncommon and may pose diagnostic as well as intraoperative challenges. We report a case of a term pregnant woman undergoing cesarean delivery in whom an incidental myometrial cyst was identified intraoperatively. Histopathological examination confirmed cystic adenomyosis. This case highlights the importance of recognizing such rare entities and discusses their clinical implications and management during pregnancy.

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## I. INTRODUCTION

Myometrial cysts are defined as cystic spaces within the uterine myometrium and are rarely encountered in routine clinical practice [1]. They are most commonly associated with adenomyosis and cystic degeneration of uterine leiomyomas.

Their presence during pregnancy is particularly rare due to hormonal and structural changes in the uterus [2]. Larger cysts may mimic adnexal masses and complicate antenatal diagnosis and obstetric management.

## II. CASE PRESENTATION

A 27-year-old woman, G3P2L2, at 37 weeks of gestation, presented with irregular uterine contractions. She was a booked case with regular antenatal follow-up.

### ➤ Antenatal Findings

Routine ultrasonography at 14 weeks revealed:

- A single live intrauterine fetus
- A 7 × 7 cm multiloculated space-occupying lesion in the right adnexa, suggestive of a complex ovarian cyst

She was advised further evaluation with MRI.

### ➤ MRI Findings

MRI pelvis demonstrated:

- A T2 hyperintense multiloculated cystic lesion, slightly tubular in shape
- Located in the right lumbar region

### ✓ Differential Diagnoses Included:

- Complex ovarian cyst
- Hydrosalpinx

The remainder of her antenatal period was uneventful.

### ➤ Management

The patient was planned for:

- Elective lower segment cesarean section (LSCS) at 37 weeks
- Simultaneous excision of the presumed right adnexal mass

### ➤ Intraoperative Findings

Following delivery during cesarean section:

- A 8 × 5 cm cystic lesion was identified within the posterior fundal myometrium on the right side, adjacent to the right adnexa

### ✓ Additional Findings Included:

- Multiple small degenerated fibroids
- Adenomyotic changes of the uterus

### ➤ Cyst Characteristics

- Contained brownish (“chocolate-colored”) fluid
- Well circumscribed
- No communication with the uterine cavity

The cyst was aspirated and completely excised. The procedure was completed without intraoperative complications.

➤ *Histopathological Examination*

Microscopic examination revealed:

- Endometrial glands and stroma lining the cyst
- Surrounding smooth muscle hyperplasia
- No evidence of atypia or malignancy

➤ *Final Diagnosis*

Cystic adenomyosis (adenomyotic cyst)

➤ *Postoperative Course*

The postoperative period was uneventful. The patient recovered well and was discharged in stable condition. She remained asymptomatic on follow-up.

### III. DISCUSSION

Myometrial cysts in pregnancy are extremely rare and are often diagnosed incidentally during cesarean section [3].

In our case, the lesion was initially interpreted as a right adnexal mass on both ultrasonography and MRI. This diagnostic dilemma can be attributed to the lateral location of the cyst and its close proximity to the adnexa, along with distortion of uterine anatomy during pregnancy, leading to misinterpretation even with advanced imaging modalities.

➤ *Pathogenesis*

These cysts are thought to arise from ectopic endometrial tissue within the myometrium, leading to cyclic hemorrhage and cyst formation [4].

➤ *Why Rare in Pregnancy?*

- Decidualization of endometrial tissue
- Hormonal suppression of cyclic bleeding
- Expansion of uterine musculature masking small lesions [5]

➤ *Clinical Significance*

- Usually asymptomatic
- Rarely may cause pain, rupture, or bleeding [6]
- May mimic fibroids or adnexal masses

➤ *Diagnosis*

- Ultrasound may miss small lesions
- MRI is more sensitive but not routinely used unless indicated [7]

➤ *Management*

- Conservative if asymptomatic
- Surgical excision during cesarean section is safe and effective when the lesion is accessible [8]

➤ *Differential Diagnosis*

- Degenerating fibroid

- Müllerian cyst
- Uterine sarcoma (extremely rare in pregnancy)
- Complex ovarian cyst
- Hydrosalpinx
- Cystic adenomyosis

### IV. CONCLUSION

Myometrial cysts during pregnancy are rare and often incidental findings. Recognition of this entity is important to avoid misdiagnosis and unnecessary intervention. Surgical excision during cesarean section is a safe and effective management option when encountered.

➤ *Learning Points*

- Myometrial cysts in pregnancy are extremely rare and often incidental findings.
- They may mimic adnexal masses on antenatal imaging, leading to diagnostic confusion.
- Cystic adenomyosis should be considered in the differential diagnosis of complex cystic pelvic lesions in pregnancy.
- Intraoperative identification is crucial for appropriate management.
- Surgical excision during cesarean section is safe and effective when feasible.

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