

## CLINICAL IMAGE

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# Unusual presentation of a case of endometriosis diagnosed without laparoscopy

David Horvath, Utkarsh Pandey

## CASE REPORT

A 27-year-old nulliparous female was referred for obstetric and gynecological services due to a four-year history of progressively worsening pelvic pain, pelvic fullness, and dyspareunia. On several occasions, she had experienced significant post-coital abdominal pain leading to nausea and vomiting. Additionally, she complained of nausea, diarrhea, bilateral lower limb pain, and lower back pain in the last week of the luteal phase of the menstrual cycle, which resolved within the first few days of menstruation. Her personal female history was menarche at age 10, heavy and regular periods lasting five days, bacterial vaginosis on and off in the last year, and infertility. There was no family history of endometriosis.

Her vital signs were within normal limits. Physical examination revealed an abdomen that was not distended, soft, without tenderness, and without masses. On a pelvic exam, the patient complained of bilateral adnexal tenderness. No masses were palpable. Other than the aforementioned complaints, the patient reports she is in good health.

Ultrasound of the abdomen with a follow-up computed tomography (CT) scan with and without contrast was obtained in the prior month. The ultrasound identified a 3.2 × 2.7 × 2.0 cm circumscribed ovoid mass with internal heterogeneous material located between the ovaries in the pouch of Douglas at the level of the lower uterine segment (Figure 1). A CT scan was ordered to further characterize this mass, rule out other causes of abdominopelvic pain, and assist with surgical planning

if this became a prospect in the future. Furthermore, the patient opted for a CT scan due to the time and financial barriers of magnetic resonance imaging (MRI). On axial CT with contrast, the ovoid structure had high noncontrast attenuation suggesting products of hemorrhage, a finding commonly seen with endometriomas (Figure 2). Axial CT also demonstrated enlarged ovaries, positioned in close proximity to each other in the pouch of Douglas, with each ovary containing irregular cystic lesions (Figure 2). This juxtaposition of the ovaries is sometimes referred to as “kissing ovaries” sign, which is highly associated with pelvic endometriosis [1]. Similarly, the coronal CT with contrast showed both ovaries as multicystic structures in close proximity (Figure 3). The aforementioned endometrioma was inferomedial to the ovaries in the coronal plane and tangential to the anterior rectal wall in the axial frame (Figures 2 and 3).

The patient declined both laparoscopy for definitive diagnosis and referral for fertility treatment due to financial and time constraints. Cancer antigen 125 levels were obtained to partly circumvent the limitation created by a foregone laparoscopy. Laboratory results demonstrated a cancer antigen 125 level of 52 U/mL (reference value: <35 U/mL), supporting either a diagnosis of endometriosis or endometrial cancer. A provisional diagnosis of endometriosis was made based on the above report.

The daily oral contraceptive, levonorgestrel and ethinyl estradiol combination (0.15 mg/0.03 mg), was prescribed along with over-the-counter 200 mg of

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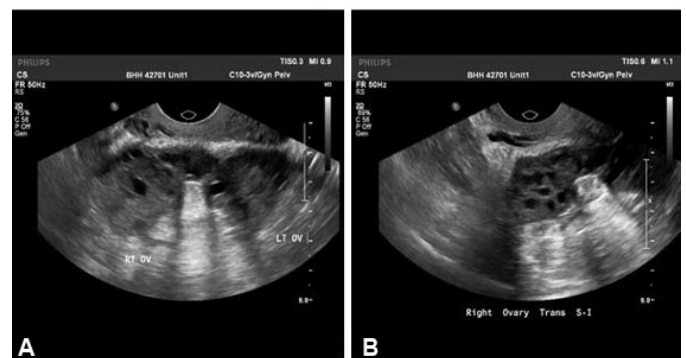


Figure 1: (A) An US demonstrating kissing sign. (B) An US showing a heterogeneous cyst resembling an endometrioma budding off the right ovary.



Figure 2: Axial CT with contrast showing multicystic, juxtaposed ovaries in the pouch of Douglas (“kissing sign”). Although difficult to discern, part of the endometrioma is tangent to the anterior rectal wall.

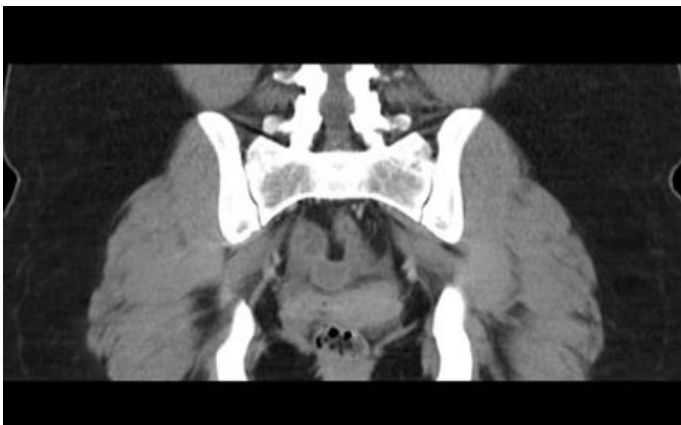


Figure 3: Coronal CT with contrast showing multiloculated ovaries. Inferomedial to the ovaries is a homogenous appearing cyst likely to represent an endometrioma.

Ibuprofen four times daily if needed to help manage her endometriosis-related pain. On follow-up, the patient continued to endorse the same intensity of endometrial pain, despite strict compliance with the prescribed regimen. The decision to perform laparoscopy for diagnosis and treatment was discussed and declined again.

## DISCUSSION

Because of the varied symptoms and clinical presentation, it is important to keep endometriosis in the differential diagnosis of women of child bearing age with chronic pelvic pain. Despite the fact that laparoscopy is key to the definitive diagnosis of endometriosis; due to its invasive nature, the successful diagnosis is largely contingent upon appropriate clinical acumen and judgment. One of the major shortcomings and resultant patient complaints of current clinical practice and

management is the delay in diagnosis due to the difficulty in efficiently applying the current diagnostic criteria. To that end, it is important that we continually work to expand our knowledge of all potential markers of the condition so that the diagnosis can be made in a quicker timeframe going forward.

In the case of this patient, there were two relatively unique symptoms exhibited. The first was post-coital nausea and vomiting and the second was bilateral lower limb pain. Due to the direct connection between the pelvis and peritoneal cavity in women, the theory of retrograde menstruation posits that endometriosis can spread to the peritoneal space. It is possible that due to excess physical stimulation during intercourse, irritation of inflamed ectopic endometrial sites could trigger feelings of nausea and cause vomiting. In the case of the second symptom; ectopic endometrial tissue in the lower extremities could contribute to bilateral lower limb pain; similarly to how it can cause pelvic and abdominal pain.

## CONCLUSION

In this patient with a four year history of endometriosis, several non-laparoscopic symptoms were crucial to arriving at her ultimate diagnosis. She had some very classical clinical symptoms such as dyspareunia, progressively worsening pelvic pain, pelvic fullness, and lower back pain that began leading up to the menstrual cycle and resolved shortly after menstrual flow. On CT scan, she had what is known as the “kissing ovaries” sign and an endometrioma, which are well known to be associated with endometriosis. In addition to the more typical signs above, she also had two uncommon findings: post-coital symptoms and bilateral lower limb pain. Future work from a diagnostic and data-gathering standpoint could focus on identifying how common these signs are in other patients with a diagnosis of endometriosis. Overall, identification of the wider array of symptoms, laboratory values, and imaging findings associated with endometriosis is important to making the diagnostic process more efficient and helping patients with the condition get appropriate care sooner than they currently do.

**Keywords:** Endometrioma, Endometriosis, Kissing ovaries, Pelvic pain

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## REFERENCE

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## Author Contributions

David Horvath – Conception of the work, Acquisition of data, Analysis of data, Interpretation of data, Drafting the work, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Utkarsh Pandey – Design of the work, Drafting the work, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity

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The corresponding author is the guarantor of submission.

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## Consent Statement

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## Conflict of Interest

Authors declare no conflict of interest.

## Data Availability

All relevant data are within the paper and its Supporting Information files.

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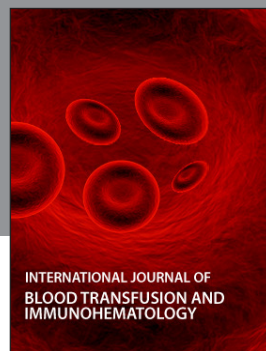
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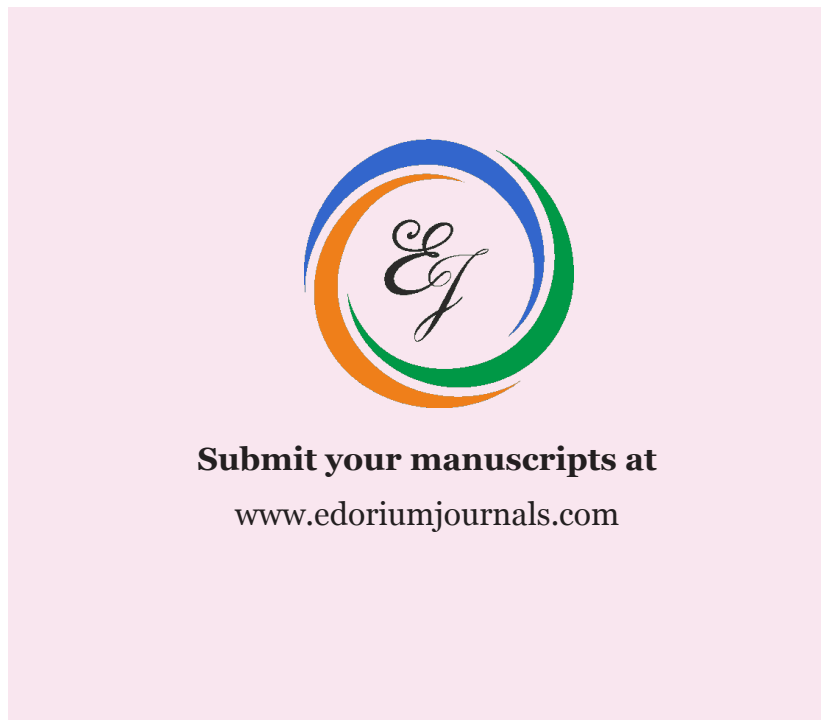
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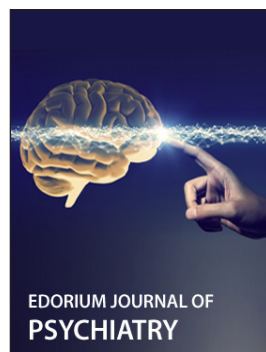
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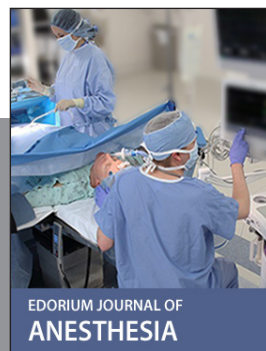
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