Case Report

BIOMEDICAL Journal of Scientific & Technical Research

ISSN: 2574 -1241

DOI: 10.26717/BJSTR.2026.67.010478

An Unsuspected Ruptured Ovarian Ectopic Pregnancy Presenting to the Medicine Outpatient Department: A Case Report

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ARTICLE INFO

Received: October 28, 2026

Published: November 12, 2026

Citation: Panchami Pradeep Mini, Bhavika Shetty, Nivedita Moulick, Jayshree Ankur Patil, Rohan H Sawant. An Unsuspected Ruptured Ovarian Ectopic Pregnancy Presenting to the Medicine Outpatient Department: A Case Report. Biomed J Sci & Tech Res 67(2)-2026. BJSTR. MS.ID.010478.

ABSTRACT

Background: Ovarian pregnancy accounts for about 0.5–3% of ectopic pregnancies and is seldom diagnosed before surgery. An atypical presentation can delay diagnosis further.

Case Presentation: A 26-year-old woman (gravida 3, para 2, living 2) with regular menstrual cycles and a last menstrual period 13 days earlier presented with 3–4 days of generalised abdominal pain, bloating and hard stools. She was admitted to internal medicine with a provisional diagnosis of constipation. She was tachycardic (113/min) with leucocytosis (16,290/mm^3). Ultrasonography showed a bulky left ovary with mixed solid–cystic areas and free fluid, without an intrauterine gestational sac. Non-contrast computed tomography showed a 7.5 × 5.6 × 5.8 cm heterogeneous left ovary with mild haemoperitoneum. A urine pregnancy test, obtained about 11 hours after admission, was positive. Emergency laparotomy revealed a ruptured left ovarian pregnancy with 100–200 mL of haemoperitoneum and an absent right fallopian tube. Left salpingo-oophorectomy was performed. She received two units of packed red cells, the second complicated by a febrile non-haemolytic transfusion reaction, and was discharged three days after surgery.

Conclusions: A ruptured ovarian pregnancy can present with predominantly gastrointestinal symptoms in a woman who reports regular menses. A pregnancy test at first contact in every woman of reproductive age with abdominal pain would have shortened the diagnostic interval and avoided computed tomography before pregnancy status was known.

Keywords: Pregnancy; Ectopic; Ovarian Pregnancy; Hemoperitoneum; Abdomen; Acute; Constipation; Pregnancy Tests; Diagnostic Errors; Case Reports

Introduction

More than 95% of ectopic pregnancies implant in the fallopian tube. In a French population-based register of 1,800 ectopic pregnancies, 3.2% were ovarian [1]. The reported incidence of ovarian pregnancy is 1 in 7,000 to 1 in 40,000 live births [2]. In a recent series of 146 cases it made up 3.12% of ectopic pregnancies [3]. Ovarian pregnancy differs from tubal pregnancy in two ways that matter clinically. First, its risk factors differ. Intrauterine devices and assisted reproduction are over-represented, while tubal disease plays a smaller role [3,4]. Second, it bleeds more. Compared with tubal pregnancy, ovarian pregnancy has higher rates of rupture (54% vs 38%) and haemorrhagic shock (7.4% vs 2.9%), and a larger haemoperitoneum [3]. Preoperative diagnosis remains difficult. On ultrasonography an ovarian gestation resembles a corpus luteum or a haemorrhagic cyst, and in institutional series only a small minority of

cases are identified before surgery [2,4, 5]. The diagnosis is confirmed at operation and on histopathology using the Spiegelberg criteria [6]. We report a ruptured left ovarian pregnancy in a woman with regular menses who was initially admitted to internal medicine with suspected constipation. The case illustrates a preventable diagnostic delay. It is reported in accordance with the CARE guideline [7].

Case Presentation

Patient Information

A 26-year-old married woman presented to the internal medicine outpatient department of a tertiary teaching hospital in western India on 18 February 2026. She had 3–4 days of generalised abdominal pain, bloating and hard stools. The pain was predominantly in the lower abdomen, progressively worsening, and radiated to the lower back. She had difficulty passing stool and flatus, and from the morning of presentation she had pain on micturition. About 10 days earlier she had had a febrile illness treated by a local practitioner. She denied vomiting at presentation, haematuria, rectal bleeding and vaginal bleeding or discharge. She was gravida 3, para 2, living 2, with two previous uncomplicated vaginal deliveries. Her cycles were regular. The last menstrual period began on 5 February 2026 (13 days before presentation) and the previous one on 2 January 2026. She reported protected intercourse about 15 days before presentation. About 8 years earlier she had undergone a laparoscopic abdominal procedure, recorded as a possible laparoscopic appendicectomy or excision of a mass; operative records were unavailable. She had no known comorbidities or drug allergies.

Clinical Findings

On arrival she was alert and afebrile. Pulse was 113/min, blood pressure 120/90 mmHg, respiratory rate 20/min and oxygen saturation 99% on room air. Weight was 52.1 kg and body mass index 23.2 kg/m^2. There was no pallor, icterus or lymphadenopathy; acanthosis nigricans was noted. The abdomen was soft and mildly distended, with healed laparoscopic port scars and an abdominal girth of 90 cm. On surgical review there was deep tenderness in both iliac fossae and the suprapubic region, without guarding or rigidity. Digital rectal examination showed a roomy rectum with minimal normal-coloured stool. Cardiovascular, respiratory and neurological examinations were normal. The provisional diagnosis was constipation. She was admitted to internal medicine, with referrals to obstetrics and gynaecology and to general surgery.

Timeline

The pregnancy test was positive about 11 hours after admission; surgery began 3 hours later (Table 1).

Table 1: Timeline of events, reconstructed from the medical, nursing and anaesthesia records.

Date and time	Event
~10 days before	Febrile illness, treated by a local practitioner
3–4 days before	Onset of abdominal pain, bloating and hard stools
18 Feb, 10:52	Seen in medicine outpatients; provisional diagnosis of constipation
18 Feb, 13:30	Admitted to the medicine ward; gynaecology and surgery referrals
18 Feb, 14:30	Surgical review: bilateral iliac fossa tenderness, no peritonism; erect abdominal radiograph advised
18 Feb, 16:00	Hb 11.9 g/dL, TLC 16,290/mm^3; abdominal radiograph shows no air–fluid levels
18 Feb (time not recorded)	Ultrasonography: bulky left ovary, free fluid, no intrauterine sac
18 Feb, 21:00	Pain worse despite analgesia; non-contrast CT abdomen and pelvis performed
18 Feb, 22:00–23:45	Urine pregnancy test ordered; delayed by kit availability and no urine output; two episodes of vomiting
19 Feb, 00:00	Urinary catheter placed; urine collected
19 Feb, 00:30	Urine pregnancy test positive; gynaecology team takes over care
19 Feb, 01:00–01:30	Gynaecology review: distension, left iliac tenderness with rebound; pulse 88/min, low volume; transient fall in blood pressure treated with crystalloid boluses; blood cross-matched
19 Feb, 02:30	Transferred to theatre
19 Feb, 03:34	Laparotomy under general anaesthesia; left salpingo-oophorectomy
19 Feb, 03:57–06:10	First unit of packed red cells
20 Feb, 07:33	Hb 9.6 g/dL, TLC 13,750/mm^3
20 Feb, ~17:00	Second unit of packed red cells; febrile non-haemolytic transfusion reaction
22Feb	Discharged in stable condition

Diagnostic Assessment

Laboratory Findings: The admission leucocytosis and the 2.3 g/dL fall in haemoglobin by the first postoperative day were the main abnormalities (Table 2). An interim haemoglobin on the morning of 19 February was about 10.7 g/dL (handwritten record). Renal function and electrolytes were normal: urea 17.4 mg/dL, creatinine 0.5 mg/dL, sodium 141, potassium 3.9 and chloride 104 mEq/L. Liver tests showed total bilirubin 1.08 mg/dL, AST 43 IU/L, ALT 42 IU/L, alkaline phosphatase 63 IU/L and albumin 3.8 g/dL. Random capillary glucose was 105–122 mg/dL. Urinalysis showed trace protein and 1–2 pus cells, and urine culture was sterile. HIV, HBsAg and HCV screening were non-reactive. Blood group was O Rh(D)-positive. Serum β-hCG was requested but no result is recorded. The urine pregnancy test was positive at 00:30 on 19 February.

Table 2: Laboratory results.

Parameter	18 Feb (admission)	20 Feb (after 1 unit PRBC)	Reference range
Haemoglobin (g/dL)	11.9	9.6	12–15
Packed cell volume (%)	36.4	29.6	36–46
Total leucocyte count (/mm³)	16,290	13,750	4,000–11,000
Neutrophils (%)	—	80	40–75
Platelets (×10⁵/mm³)	4.05	3.26	1.5–4.0

Note: PRBC, packed red blood cells.

Imaging: An erect abdominal radiograph showed no air–fluid levels. Ultrasonography showed a bulky left ovary with heterogeneous solid and cystic areas and two enlarged follicular cysts, a normal right ovary, no intrauterine gestational sac, and mild free fluid (Figures 1-3). Non-contrast CT of the abdomen and pelvis showed a bulky left ovary measuring 7.5 × 5.6 × 5.8 cm (transverse × anteroposterior × craniocaudal). It contained heterogeneous solid and cystic areas and two enlarged follicles of 30 × 28 mm and 32 × 27 mm. There was mild haemoperitoneum in the pelvis and both paracolic gutters (right > left). The uterus, right ovary and appendix were normal. The colon was loaded with faeces, and there was an incidental 10 mm omental umbilical hernia. In view of the positive pregnancy test, the radiologist reported the findings as likely a left adnexal ectopic pregnancy, with torsion–detorsion as the alternative (Figure 4).

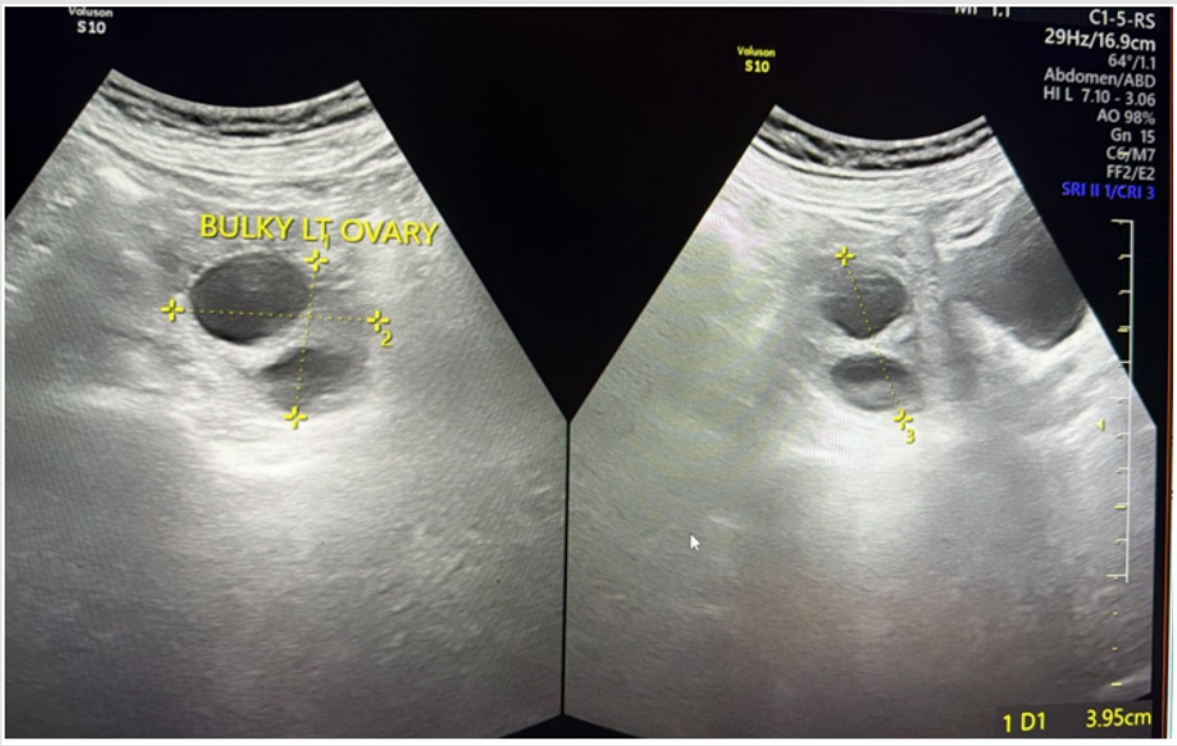


Figure 1: Transabdominal ultrasonography (curvilinear probe) showing the bulky left ovary with two adjacent anechoic cystic areas; callipers across the ovary.

 DOI: 10.26717/BJSTR.2026.67.010478

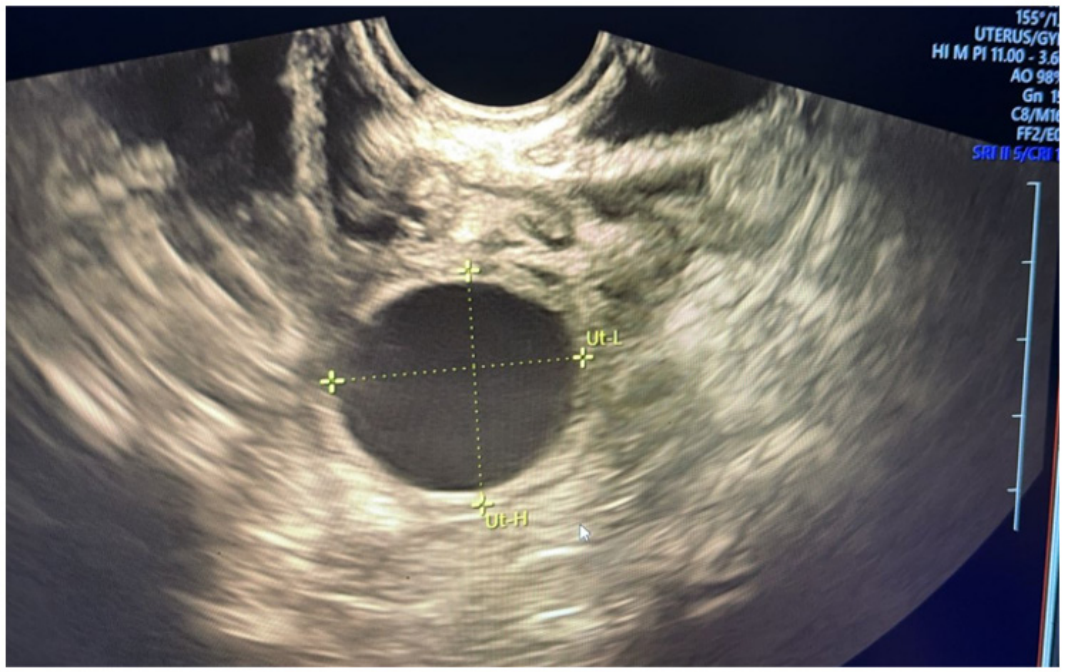


Figure 2: Transvaginal ultrasonography showing a well-defined anechoic cystic lesion (callipers).

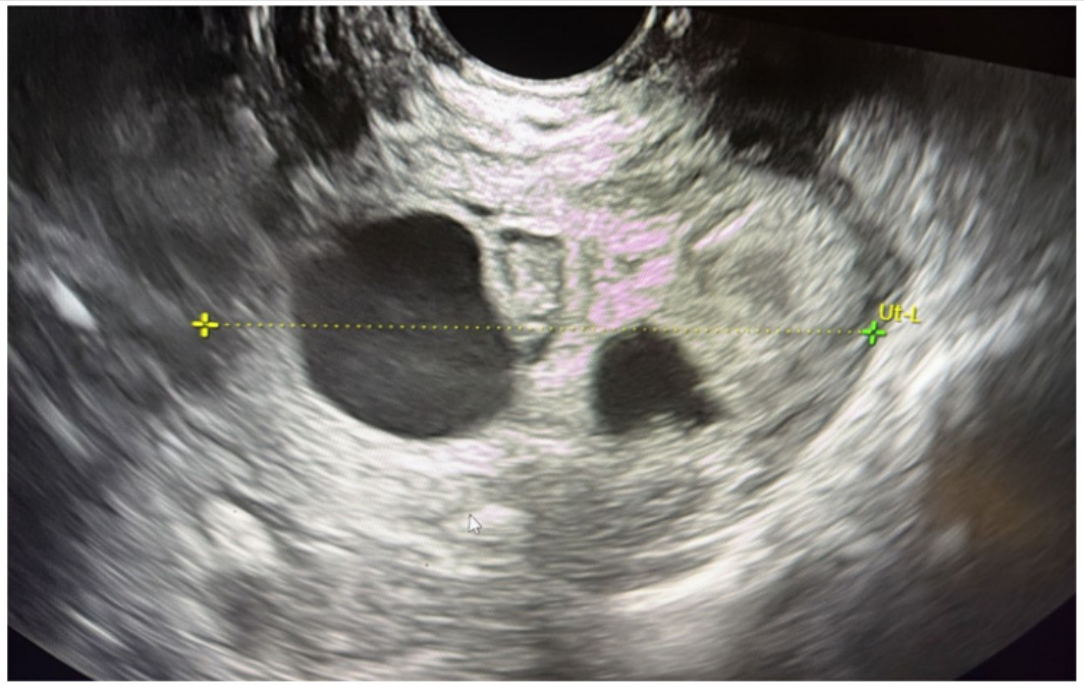


Figure 3: Transvaginal ultrasonography, transverse plane, showing two anechoic cystic areas in the pelvis.

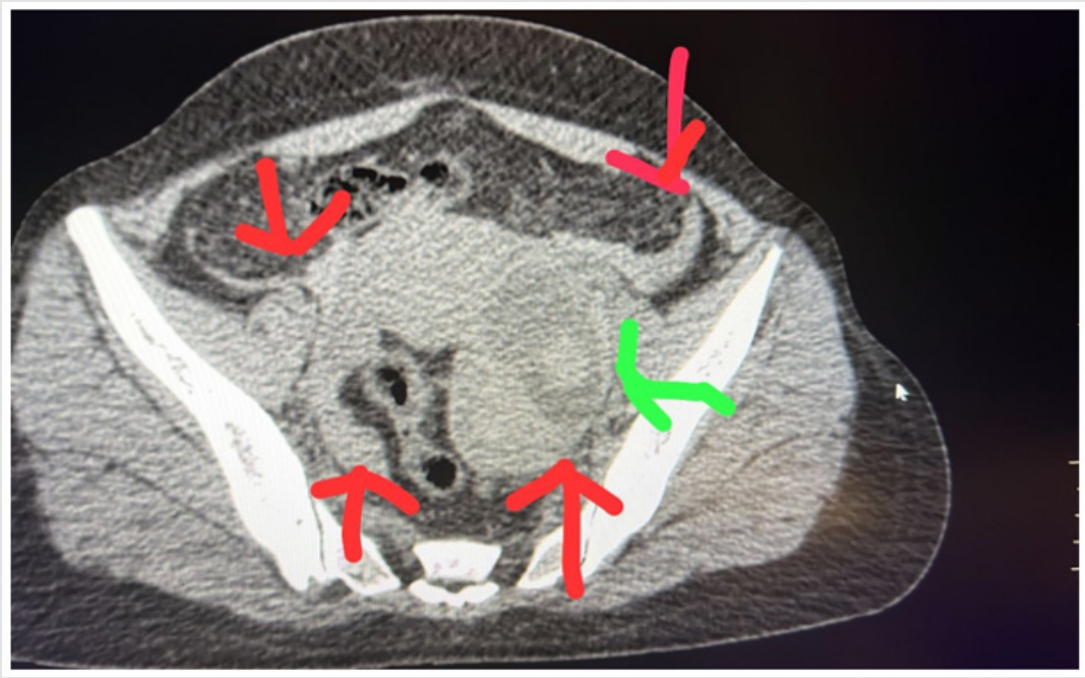


Figure 4: Axial non-contrast CT of the pelvis. The green arrow marks the bulky, heterogeneous left adnexal mass; the red arrows mark free fluid (haemoperitoneum).

Differential Diagnosis: Before the pregnancy test, the differential diagnosis was functional constipation, subacute intestinal obstruction, urinary tract infection and appendicitis. After ovarian enlargement and free fluid were found, it included a ruptured haemorrhagic corpus luteum, ovarian torsion–detorsion and pelvic inflammatory disease with tubo-ovarian abscess. The positive pregnancy test, empty uterus and haemoperitoneum made a ruptured ectopic pregnancy the working diagnosis. Its ovarian site was established at surgery.

Diagnostic Challenges: The menstrual history, the gastrointestinal symptoms and faecal loading on CT all pointed away from pregnancy. Obtaining a urine sample was delayed because the unavailability of test kit and the patient was not passing urine.

Therapeutic Intervention: Before the diagnosis she received intravenous fluids, parenteral analgesia and nasogastric decompression for presumed constipation with vomiting. After the positive pregnancy test she was given crystalloid boluses for a transient fall in blood pressure, and two units of blood were cross-matched. Written high-risk consent was obtained, and ceftriaxone 2 g was given intravenously before incision. Emergency exploratory laparotomy began under general anaesthesia at 03:34 on 19 February. The findings were a ruptured ectopic pregnancy arising from the left ovary (Figure 5), haemoperitoneum of about 100–200 mL, an absent right fallopian tube, and normal small and large bowel. A left salpingo-oophorectomy was performed. The peritoneal cavity was lavaged with normal saline and a 28 Fr drain placed. The abdomen was closed in layers with polyglactin 1, and the skin with polyamide 2-0. One unit of packed red cells was transfused during the operation. The specimen was fixed in 10% formalin for histopathology.

Follow-Up and Outcomes: Postoperatively she received intravenous ceftriaxone and metronidazole, analgesia and mechanical thromboprophylaxis, and was later switched to oral cefuroxime. Haemoglobin on 20 February was 9.6 g/dL, and a second unit of packed red cells was started that afternoon. About 15 minutes into the transfusion she developed chest discomfort, chills and a temperature of 100.6°F (38.1°C). She was treated for a febrile non-haemolytic transfusion reaction with intravenous chlorpheniramine, hydrocortisone 100 mg, paracetamol 1 g and supplemental oxygen. Her symptoms resolved without haemodynamic compromise. The rest of her recovery was uneventful. She mobilised, tolerated a full diet, and the wound remained dry. She was discharged in stable condition on 22 February 2026, three days after surgery, on oral cefuroxime, a proton-pump inhibitor and an oral analgesic–anti-inflammatory. [AUTHORS: add post-discharge follow-up — wound review, histopathology result, and whether serum β-hCG was followed to negative.]

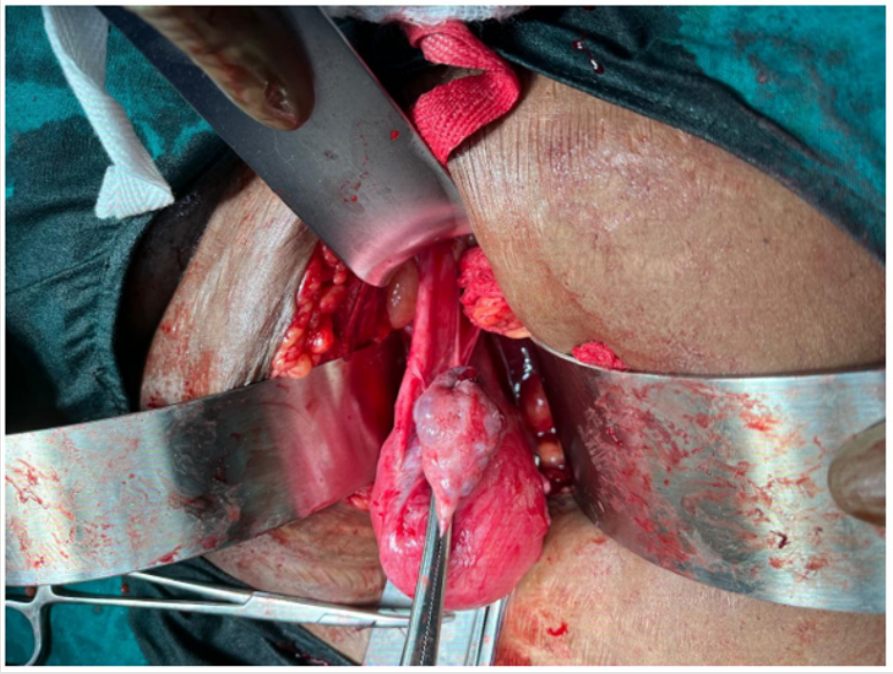


Figure 5: Intraoperative photograph at laparotomy showing the exteriorised, congested left adnexal mass (ovarian ectopic pregnancy) held in forceps.

Discussion

This case shows how a ruptured ovarian pregnancy can present as a gastrointestinal complaint. A reassuring menstrual history, bowel symptoms, leucocytosis and faecal loading on CT each pointed away from pregnancy. The pregnancy test that settled the diagnosis was obtained about 11 hours after admission and after CT.

Why the Presentation Misled

Blood in the pelvis irritates the peritoneum over the rectosigmoid and bladder. This can produce bloating, tenesmus, difficulty passing stool and flatus, dysuria and back pain, all of which were present here. Leucocytosis is common with haemoperitoneum and, with a recent febrile illness, suggested infection. The menstrual history was the key pitfall. A period 13 days before presentation seems to exclude pregnancy, yet a rupture with haemoperitoneum in mid-February is more consistent with conception after the 2 January menses. The "period" of 5 February was probably first-trimester bleeding. NICE warns that atypical presentation of ectopic pregnancy is common. It lists gastrointestinal symptoms, urinary symptoms and pain on defecation among the possible presentations [8].

Test First, then Image

NICE guidance recommends a pregnancy test for every woman of reproductive age with abdominal or pelvic pain or other symptoms of possible ectopic pregnancy [8]. ACOG likewise advises a high index of suspicion in any woman of reproductive age with abdominal pain or vaginal bleeding [9]. A test at triage would have redirected care to serum β-hCG, transvaginal ultrasonography and early gynaecological review. It would also have established pregnancy status before CT. The radiation dose from a single abdominopelvic CT is generally below the threshold for fetal harm, and CT is not contraindicated when needed [10]. Even so, pregnancy status should be known before ionising radiation is used in women of reproductive age. Here, two process factors added delay: unavailability of test kit, and difficulty obtaining urine before catheterisation. Both are modifiable, for example by stocking point-of-care kits in admission areas.

Imaging

Neither ultrasonography nor CT showed an extra-uterine gestational sac. The only findings were an enlarged heterogeneous ovary and free fluid, which also fit a ruptured corpus luteum or torsion–detorsion. This matches published series, in which most ovarian pregnancies are diagnosed only at surgery [2,4,5]. When the pregnancy test is positive, the uterus is empty and there is free fluid, a ruptured ectopic pregnancy should be assumed and managed whatever the adnexal findings [9,11].

Confirming the Site

The Spiegelberg criteria require that

(i) The ipsilateral tube is intact;

(ii) The gestational sac occupies the position of the ovary;

(iii) The sac is connected to the uterus by the ovarian ligament; and

(iv) Ovarian tissue is present in the sac wall [6].

The surgical team judged the pregnancy to arise from the left ovary. However, the tube was removed with the ovary, and the histopathology report was not available when this report was written. The ovarian site therefore rests on the operative findings, pending histology.

Risk Factors and Fertility

Intrauterine devices and assisted reproduction are the best-described risk factors for ovarian pregnancy [3,4]; neither was recorded here. The absent right tube and previous laparoscopic surgery point to earlier pelvic surgery, and resulting adhesions may have contributed. Because the left tube was removed, the patient now has no fallopian tubes, and future conception would require in-vitro fertilisation. This has implications for counselling. When feasible, ovary-conserving resection, preferably laparoscopic, is the recommended treatment and is achieved in most modern series [2-4]. In this case the ruptured ovary, the emergency setting and the need for transfusion led to laparotomy and salpingo-oophorectomy.

Transfusion Reaction

The second transfusion was complicated by a febrile non-haemolytic reaction. It resolved with standard treatment and did not change the course.

Strengths and Limitations

The main strength is a timed reconstruction of events from contemporaneous medical, nursing and operative records, which pinpoints where the diagnostic delay arose. The limitations are the lack of histopathological confirmation (Spiegelberg criterion 4), no recorded serum β-hCG value, and incomplete documentation of the state of the left tube and of the previous surgery. Follow-up after discharge is also short.

Conclusion

A ruptured ovarian ectopic pregnancy can present as constipation and bloating in a woman who reports regular menses. A pregnancy test at first contact, before cross-sectional imaging, is the single step most likely to prevent this delay. A positive test with an empty uterus and free fluid calls for immediate gynaecological management, whatever the adnexal findings.

Learning Points

- Offer a pregnancy test to every woman of reproductive age with abdominal pain, including when symptoms are gastrointestinal or urinary.
- A "last menstrual period" shortly before presentation may be pregnancy-related bleeding; ask about the previous period as well.
- Establish pregnancy status before ionising-radiation imaging in women of reproductive age.
- Tachycardia, leucocytosis, a falling haemoglobin or free pelvic fluid in a young woman should prompt a search for intra-abdominal bleeding.
- Ovarian pregnancy is rarely identified before surgery; histopathology is required to confirm it.

Declarations

Patient Perspective

[AUTHORS: to be written with the patient, in her own words (translated from Hindi if needed). Do not paraphrase or invent this section].

Consent For Publication

Written informed consent was obtained from the patient for publication of this case report and the accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

Ethics Approval

Institutional ethics committee approval is not required for a single-patient case report at our institution; the report complies with the Declaration of Helsinki. [AUTHORS: confirm local policy].

Author Contributions

PPM: initial assessment, clinical management, data collection, manuscript drafting. BS: gynaecological management, surgery, critical revision. Both authors read and approved the final manuscript. [AUTHORS: adjust to actual roles].

Competing Interests

The authors declare no competing interests.

Funding

This work received no specific funding.

Availability Of Data and Materials

All data relevant to the case are included in the article. Further de-identified details are available from the corresponding author on reasonable request.

Acknowledgement

The authors thank the Departments of Radiodiagnosis, Anaesthesiology and General Surgery, and the nursing staff, for their care of the patient.

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ISSN: 2574-1241

DOI: 10.26717/BJSTR.2026.67.010478

Panchami Pradeep Mini . Biomed J Sci & Tech Res

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