

Successful diagnosis of a ruptured ectopic pregnancy: A woman without abdominal pain and vaginal bleeding

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ABSTRACT

Ectopic pregnancy is the implantation of the developing embryo outside the uterine cavity. It usually occurs in the fallopian tubes. One of the critical complications of ectopic pregnancy is rupture. The most common symptoms of ectopic pregnancy rupture are vaginal bleeding and abdominal pain. In atypical presentations, the diagnosis is based on suspicion. Herein, we presented a case of ruptured ectopic pregnancy with an atypical presentation. The diagnosis of ruptured ectopic pregnancy should be considered when women with childbearing potential apply to the emergency department.

Keywords: Diagnose challenge, Ectopic pregnancy, Hemoperitoneum

1. INTRODUCTION

Ectopic pregnancy is when embryo implantation occurs outside the uterine cavity. In more than 96% of cases, implantation occurs in the fallopian tubes [1]. It occurs in approximately 0.7-2.0% of all pregnancies [2,3]. The most common clinical sign of ectopic pregnancy is vaginal bleeding or abdominal pain in the first trimester. Clinicians should be aware of the diagnosis of ectopic pregnancy in any patient of reproductive age who presents with vaginal bleeding or abdominal pain. Ectopic pregnancy patients may also be asymptomatic. In this case, the diagnosis becomes even more challenging. Bleeding due to ectopic pregnancy is one of the leading causes of pregnancy-related maternal deaths, so early diagnosis is essential. Herein, we presented a case of a woman with an atypical presentation of ruptured ectopic pregnancy. Hence, we aimed to raise awareness of ectopic pregnancy rupture diagnosis and prevent possible mortalities in patients presenting with atypical symptoms.

2. CASE REPORT

A 42-year-old female presented to the emergency department (ED) complaining of nausea, vomiting, and fatigue that began two days ago after eating fast food. She was vomiting about four to five times a day, and the contents of her vomiting were usual.

As a result, she said that her nutrition was seriously reduced, and she had difficulty even drinking water. Fatigue made this situation even more complicated, and she did not want to get out of bed. She had no abdominal pain, diarrhea, constipation, dysuria, vaginal bleeding, discharge, or any other symptoms.

The patient was Uzbek. She barely could speak the local language (Turkish), so she had some limitations in communication. She had no significant medical history. She had no alcohol or drug history and smoked one pack of cigarettes daily for about ten years. She declared that she had not had sexual intercourse recently and that there was no possibility of pregnancy. She had a single healthy pregnancy history (14 years ago). She had presented to another center with similar complaints the day before. During this presentation, the patient was diagnosed with food poisoning and anemia and was recommended to apply to hematology for the latter. She did not have any of those results or medical documentation.

In admission, her blood pressure was 82/53 mmHg, pulse was 83 beats/minute and regular, respiratory rate was 18 breaths/min, temperature was 36.9°C (98.5°F), and Glasgow coma scale was 15. Finger stick glucose level was 87 mg/dL. Her pulmonary and cardiac exams were unremarkable. On abdominal exam, bowel sounds were normal, and the patient had no tenderness, rebound,

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or rigidity. The patient's electrocardiogram (ECG) showed 87 beats per minute with sinus rhythm without signs of ischemia or dysrhythmia. Other examinations were unremarkable.

Gastroenteritis with severe fluid loss was considered a preliminary diagnosis in the patient. Then, symptomatic treatment was started. For this purpose, hydration was performed, and 8 mg of ondansetron was given. Venous blood gas was requested regarding possible electrolyte disturbance due to decreased oral intake of the patient and excessive fluid loss. A complete blood count test was requested, considering that the patient's anemia might have deepened because she had severe fatigue. Venous blood gas results were within normal limits. However, the hemoglobin level was 3.7 g/dL, red blood cell count was $1.2 \times 10^6/\text{mCL}$ (Normal range: $3.5\text{-}5.7 \times 10^6/\text{mCL}$), mean corpuscular volume was 87.3 fL (in normal range), red cell distribution width was 14.8 (in normal range). In line with these results, acute blood loss was considered in the patient. Erythrocyte replacement was planned, and the blood bank was contacted quickly. Meantime, the relatives of the patients brought the previous results, and it was seen that the hemoglobin was 6.4 g/dL two days ago.



Figure 1. A: Liver B: Morison's Pouch filled with fluid C: Right kidney

These results strengthened the pre-diagnosis of acute bleeding. When the patient was questioned about any trauma or bleeding history again, she denied it. There was no evidence of bleeding on the rectal examination. No blood was observed in the vomit content of the patient who vomited in the hospital. When her menstrual cycle was questioned, the patient did not remember her last menstrual period, and she described that there was no change in her cycle and her bleeding amount was average (3 pad changes per day, for approximately 4-6 days). Then, bedside ultrasonography was performed, and it showed extensive hemoperitoneum in the abdomen (Figure 1). There was no evidence of liver, spleen, or kidney injury. The internal genitals could not be visualized adequately because the patient's bladder

was empty. However, it was seen that the uterus was prominent, but no pregnancy material was observed in the uterus. Beta-human chorionic gonadotropin (B-hCG) test was taken while two units of erythrocyte suspension were replaced. The patient was consulted to Departments of Gynecology and General Surgery. With the result of B-hCG as 34,773 U/L, the patient was taken to surgery with the diagnosis of ectopic pregnancy rupture. Laparoscopy revealed a hemoperitoneum with 3000 mL of blood with a ruptured right fallopian tube ectopic pregnancy. Evacuation of the clot and a right salpingectomy was successfully performed. The patient was discharged without complications on the sixth postoperative day.

3. DISCUSSION

Ruptured ectopic pregnancy is a life-threatening condition, and the prevalence among pregnant patients presenting with abdominal pain and first-trimester bleeding is 16% [4]. An ectopic pregnancy's clinical signs (mainly abdominal pain and bleeding) typically appear six to eight weeks after the last menstrual period. It may sometimes be accompanied by standard pregnancy disorders (e.g., breast tenderness, frequent urination, nausea). Since, progesterone, estradiol, and hCG levels are lower than in healthy pregnancies, early pregnancy symptoms are less or milder in patients with ectopic pregnancy [5]. Because pregnancy symptoms are mild, patients may not realize they are pregnant during this period, as in our case.

The most important finding that leads the clinician to the diagnosis is abdominal pain or vaginal bleeding in pregnant women. In a study conducted on 2026 pregnant patients admitted to the emergency department, 376 patients were diagnosed with ectopic pregnancy, and vaginal bleeding was found in 76% of them and abdominal pain in 66% [6]. Therefore, it is even more challenging to reach this diagnosis in a patient who does not know that she is pregnant and does not have abdominal pain and vaginal bleeding. Moreover, in our case, attributing the patient's chief complaints (nausea and fatigue) to food poisoning was another factor that concealed the primary diagnosis.

The presence of hypotension (lower than baseline) at the patient's admission indicated something was wrong, but the absence of a tachycardia response excluded the preliminary shock diagnosis. Although, the patient did not use a drug that may hide this response (beta blocker or calcium channel blocker), the absence of a tachycardia response suggested that chronic anemia may be accompanying acute anemia. In such cases, it is crucial to learn the patients' baseline values and make patient-based management. The severe decrease in the hemoglobin level (2.7 g/dL) within two days in the case of an indistinct clinical condition was one of the most critical factors leading us to the diagnosis. Gastrointestinal bleeding or trauma is usually the most common cause of acute blood loss. In our case, we deepened the story and advanced our examinations and evaluations to exclude them. The fact that we detected widespread fluid in the abdomen in the ultrasonography allowed us to diagnose ruptured ectopic pregnancy. Bedside ultrasonography has been used successfully in emergency

departments for years. It provides much information that guides the diagnosis as well as shortens the diagnosis time [7].

Our country has been receiving many immigrants from East and South Asia lately. Another reason that makes diagnosis difficult is that there are many gaps in the anamnesis due to the language barrier when these people apply to the hospital. In summary, the patient's denial of the possibility of pregnancy, vague symptoms, poor communication due to language barrier, no abdominal pain or vaginal bleeding, and previous diagnosis of food poisoning are the reasons that made the diagnosis of ectopic pregnancy rupture difficult in our case. Ectopic pregnancy rupture is a condition with high mortality and morbidity; it is essential to be among the differential diagnoses in women of fertile age to avoid possible mortality. If there is even a slight suspicion of pregnancy, a pregnancy test should be performed on every female patient of childbearing age.

Compliance with Ethical Standards

This work was conducted ethically by following per under Helsinki World Medical Association Declaration.

Patient Consent: The patient gave her consent for images and other clinical information relating to her case to be reported in a medical publication.

Conflict of Interest Statement: The authors have no conflicts of interest to declare.

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