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ADVANCED ABDOMINAL ECTOPIC PREGNANCY WITH PROLONGED FETAL DEMISE AND ACUTE OBSTRUCTIVE ABDOMEN: A RARE CASE REPORT AND LITERATURE REVIEW

GRAVIDEZ ECTÓPICA ABDOMINAL AVANÇADA COM ÓBITO FETAL PROLONGADO E ABDOME AGUDO OBSTRUTIVO: RELATO DE CASO RARO E REVISÃO DA LITERATURA

EMBARAZO ECTÓPICO ABDOMINAL AVANZADO CON MUERTE FETAL PROLONGADA Y ABDOMEN AGUDO OBSTRUCTIVO: REPORTE DE CASO RARO Y REVISIÓN DE LA LITERATURA

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ABSTRACT

We report a rare case of advanced abdominal ectopic pregnancy with prolonged fetal demise that progressed to acute obstructive abdomen in a 39-year-old multiparous woman living in a socially vulnerable setting and with a history of polysubstance use. The case highlights the diagnostic and therapeutic challenges of abdominal ectopic pregnancies, a condition associated with high maternal morbidity and mortality, in which early detection is often hindered by nonspecific symptoms and the absence of prenatal care. The diagnosis was initially suggested by ultrasonography and subsequently confirmed by exploratory laparotomy, which revealed a deceased fetus freely located within the abdominal cavity, a thrombosed placenta, and extensive intestinal adhesions, consistent with acute intestinal obstruction. A multidisciplinary surgical approach, involving both obstetrics and general surgery teams, enabled safe removal of the retained fetus, adhesiolysis, and resolution of the obstructive process, resulting in a favorable maternal outcome. This case underscores

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the importance of continuous obstetric surveillance, comprehensive women's healthcare, and strengthened care networks for socially vulnerable populations, in whom severe conditions may remain undetected for prolonged periods.

Keywords: Lithopedion. Abdominal Ectopic Pregnancy. Fetal Demise. Acute Abdomen. Laparotomy. Social Vulnerability.

RESUMO

Relatamos um caso raro de gravidez ectópica abdominal avançada com óbito fetal prolongado que evoluiu para abdome agudo obstrutivo em uma mulher multípara de 39 anos, residente em contexto de vulnerabilidade social e com histórico de uso de múltiplas substâncias. O caso evidencia os desafios diagnósticos e terapêuticos das gestações ectópicas abdominais, uma condição associada a elevada morbidade e mortalidade materna, cuja detecção precoce é frequentemente dificultada por sintomas inespecíficos e pela ausência de acompanhamento pré-natal. O diagnóstico foi inicialmente sugerido por ultrassonografia e posteriormente confirmado por laparotomia exploratória, que revelou um feto morto livre na cavidade abdominal, uma placenta trombosada e extensas aderências intestinais, compatíveis com obstrução intestinal aguda. Uma abordagem cirúrgica multidisciplinar, envolvendo equipes de obstetrícia e cirurgia geral, possibilitou a remoção segura do feto retido, a realização de lise de aderências e a resolução do quadro obstrutivo, resultando em desfecho materno favorável. Este caso reforça a importância da vigilância obstétrica contínua, da atenção integral à saúde da mulher e do fortalecimento das redes de cuidado para populações socialmente vulneráveis, nas quais condições graves podem permanecer não diagnosticadas por longos períodos.

Palavras-chave: Litopédio. Gravidez Ectópica Abdominal. Óbito Fetal. Abdome Agudo. Laparotomia. Vulnerabilidade Social.

RESUMEN

Reportamos un caso raro de embarazo ectópico abdominal avanzado con muerte fetal prolongada que evolucionó a abdomen agudo obstructivo en una mujer multípara de 39 años, en situación de vulnerabilidad social y con antecedente de consumo de múltiples sustancias. El caso pone de relieve los desafíos diagnósticos y terapéuticos de los embarazos ectópicos abdominales, una condición asociada a alta morbilidad y mortalidad materna, en la cual la detección temprana suele verse dificultada por síntomas inespecíficos y la ausencia de control prenatal. El diagnóstico fue inicialmente sugerido por ecografía y posteriormente confirmado mediante laparotomía exploratoria, que reveló un feto fallecido libre en la cavidad abdominal, una placenta trombosada y extensas adherencias intestinales, compatibles con obstrucción intestinal aguda. Un abordaje quirúrgico multidisciplinario, que involucró equipos de obstetricia y cirugía general, permitió la extracción segura del feto retenido, la liberación de adherencias y la resolución del proceso obstructivo, resultando en un desenlace materno favorable. Este caso subraya la importancia de la vigilancia obstétrica continua, la atención integral a la salud de la mujer y el fortalecimiento de las redes de atención para poblaciones socialmente vulnerables, en las cuales condiciones graves pueden permanecer sin diagnóstico durante largos períodos.

Palabras clave: Litopedion. Embarazo Ectópico Abdominal. Muerte Fetal. Abdomen Agudo. Laparotomía. Vulnerabilidad Social.

1 INTRODUCTION

Ectopic pregnancy is defined as the implantation of the embryo outside the uterine cavity, accounting for approximately 1% to 2% of all pregnancies (Panelli; Phillips; Brady, 2015). Among these, abdominal ectopic pregnancy represents the rarest and most potentially severe form, occurring in approximately 1 in 10,000 to 30,000 pregnancies (Singh et al., 2016). It occurs when the embryo implants directly within the peritoneal cavity or migrates secondarily following tubal rupture, subsequently attaching to visceral structures such as the omentum, intestines, liver, or abdominal wall (McDougall *et al*., 2022).

This condition carries a high risk of hemorrhage, sepsis, and intestinal complications for both the mother and the fetus. Maternal mortality rates may be seven to eight times higher than those observed in tubal ectopic pregnancies, and early diagnosis remains the greatest clinical challenge (Wong; Lim, 2020; Chong *et al*., 2024). Clinical manifestations are often nonspecific, including diffuse abdominal pain, distension, and menstrual irregularities, which delays diagnostic confirmation, particularly in socially vulnerable settings and in the absence of prenatal care (Mullany *et al*., 2023; Kriebs; Fahey, 2006).

When diagnosis is delayed, the pregnancy may progress to advanced stages and, following fetal demise, the conceptus may remain retained within the abdominal cavity for prolonged periods. This phenomenon, referred to as prolonged abdominal fetal retention or lithopedion formation, is described in the literature as an exceptionally rare event of considerable clinical complexity (Mirzaei *et al*., 2023).

The case presented herein involves a patient with a history of social marginalization, multiparity, and illicit drug use, who developed fetal demise in an abdominal pregnancy, with the fetus remaining retained in the abdominal cavity for several months until the onset of acute intestinal obstruction. This extremely rare clinical scenario highlights the intersection between social vulnerability, limited access to healthcare, and severe obstetric complications. The aim of this article is to describe, in a chronological and detailed manner, the clinical course, surgical management, and the main pathophysiological and social aspects involved in this case.

2 CASE REPORT

Patient S.S.S., a 39-year-old woman, gravida 7 para 6, whose last delivery had occurred three years earlier, lived in a socially underserved area, had received no prenatal care, and reported a history of crack cocaine, cocaine, marijuana, alcohol, and tobacco use. She denied known comorbidities or regular medication use.

On May 11, 2025, she presented to the emergency department following an episode of physical assault. During the diagnostic workup, imaging studies revealed a fetal structure within the abdominal cavity. Obstetric ultrasonography demonstrated a fetus in transverse lie without cardiac activity, associated with severe oligohydramnios, a thickened and heterogeneous placenta, and an estimated gestational age of 28 weeks and 5 days, findings consistent with intra-abdominal fetal demise.

After confirmation of fetal death, the obstetrics team was contacted. However, before clinical evaluation could be completed, the patient left the hospital against medical advice, interrupting follow-up care. This loss to follow-up was associated with ongoing psychoactive substance use and poor treatment adherence, prompting unsuccessful attempts to involve social services and local authorities.

Approximately five months later, on October 4, 2025, the patient returned to the emergency department accompanied by her daughter. She presented with elevated blood pressure but remained afebrile and hemodynamically stable. She reported severe epigastric pain for the previous 24 hours, associated with food-containing emesis streaked with blood and vaginal bleeding for five days. She denied fever, hematochezia, or recent bowel movements. She had taken paracetamol and nimesulide without symptom relief. On physical examination, she appeared agitated, disorganized, and aggressive. The abdomen was soft but diffusely tender to deep palpation, without clear signs of peritoneal irritation. Vaginal examination revealed a thickened, softened, anterior cervix that was partially dilated, with no active bleeding. The following day, her clinical condition worsened, with abdominal distension, tenderness to both superficial and deep palpation, questionable signs of peritoneal irritation, anorexia, and persistent vomiting.

Laboratory tests (Table 1) were within normal limits except for a mild elevation in C-reactive protein (5.8 mg/L). Obstetric ultrasonography revealed a fetus in transverse lie without cardiac activity, absolute oligohydramnios, and an anterior fundal placenta, with an estimated gestational age of 25 weeks and 1 day and an estimated fetal weight of 881 g.

For further diagnostic clarification, an abdominal computed tomography scan was performed, which demonstrated findings suggestive of a fetus located outside the uterine cavity, associated with intestinal subocclusion and no evidence of active bleeding or visceral perforation, as illustrated in Figure 1. Given the clinical presentation of acute abdomen and the inability to exclude the diagnosis of abdominal ectopic pregnancy, the general surgery team was consulted for joint decision-making regarding surgical management.

Figure 1

Coronal abdominal computed tomography demonstrating an extrauterine fetus with identifiable skeletal structures within the abdominal cavity, associated with dilated bowel loops, suggestive of intestinal subocclusion

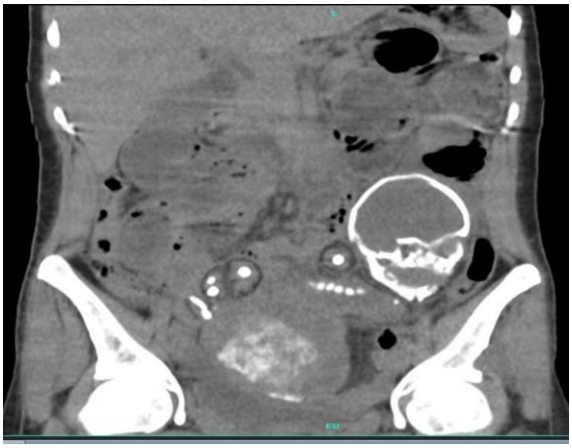


Table 1

Progression of the patient's clinical and laboratory findings in abdominal pregnancy with prolonged fetal demise

Date	Main tests	Value	Interpretation
04/10	Creatinine	0.7 mg/Dl	Normal
	C-reactive protein (CRP)	5.8 mg/L	Mild inflammation
	Hemoglobin / Hematocrit	14.4 g/dL / 42,9%	Normal
	Leukocytes (White blood cell count – WBC)	4,200 /mm³	Normal
	Platelets (Platelet count)	267,000 /mm³	Normal
06/10	Creatinine	1.7 mg/dL	Mild renal impairment
	C-reactive protein (CRP)	60.9 mg/L	Marked inflammation
	Potassium	3,5 mEq/L	Severe hyperkalemia
	Leukocytes (White blood cell count – WBC)	11,370 /mm³	Leukocytosis
Total abdominal computed tomography (10/05)	Fetal formation of approximately 25 weeks' gestation located in the left lower abdominal quadrant. Ovoid mass with soft-tissue calcification associated with coarse pelvic calcifications.	---------	Diagnosis of abdominal pregnancy
Intraoperative findings (10/05)	Fetus freely located within the abdominal cavity, thrombosed placenta, and	---------	Acute intestinal obstruction

	extensive intestinal adhesions.		

Summary of the main clinical, laboratory, ultrasonographic, and intraoperative parameters observed during hospitalization, highlighting the progression of the inflammatory process and the diagnosis of abdominal pregnancy with prolonged fetal demise.

In light of the clinical presentation, an exploratory laparotomy was performed on October 5, 2025. The procedure was initiated by the Obstetrics and Gynecology team and, upon entering the abdominal cavity, opaque serous fluid was observed, aspirated, and sent for culture. A fetus in transverse lie was identified freely within the abdominal cavity, in direct contact with the viscera, without an amniotic sac, and firmly adherent to distended bowel loops. Extensive fibrotic bands and dense adhesions involving the conceptus and adjacent intestinal segments were noted, causing obstruction of the hypogastric, mesogastric, and bilateral flank regions, consistent with a significant chronic inflammatory process associated with mechanical small bowel obstruction, as demonstrated in Figures 2–4.

Figure 2

Extensive intestinal adhesions observed during exploratory laparotomy, demonstrating mechanical small bowel obstruction

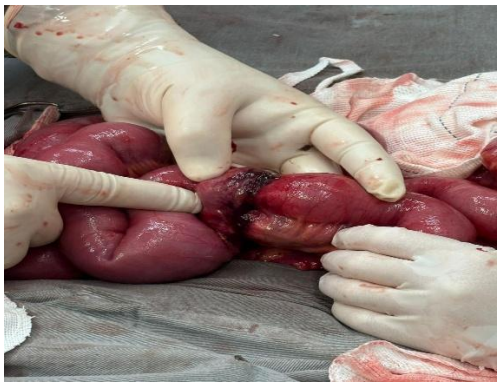


Figure 3

Fetus freely located within the abdominal cavity, in direct contact with the viscera, without an amniotic sac

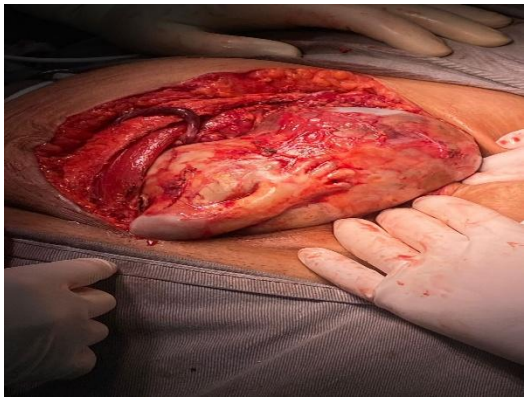
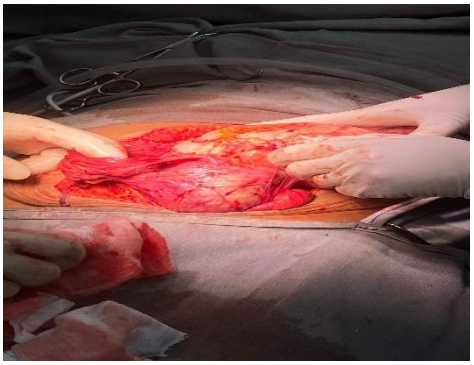


Figure 4

Fibrotic bands involving the conceptus and adjacent bowel loops, consistent with a chronic inflammatory process

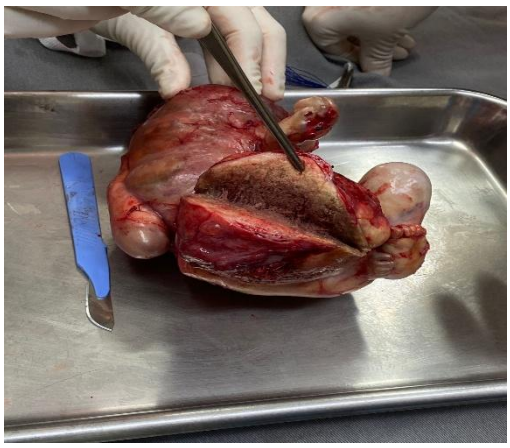


The Obstetrics team proceeded with fetal removal following careful identification and dissection of the structures, performing omental dissection from the anterior fetal surface and releasing adhesions involving posterior bowel loops. Subsequently, the placenta was found to be completely detached from all pelvic structures and confined to the amniotic sac (Figure 5), with the maternal surface entirely thrombosed. The specimen weighed 1,055 g. The uterus, bilateral adnexa, posterior cul-de-sac, and ureters were then inspected and showed no evidence of injury or abnormalities.

Given a gestational age greater than 20 weeks and a fetal weight exceeding 500 g, a fetal death certificate was issued.

Figure 5

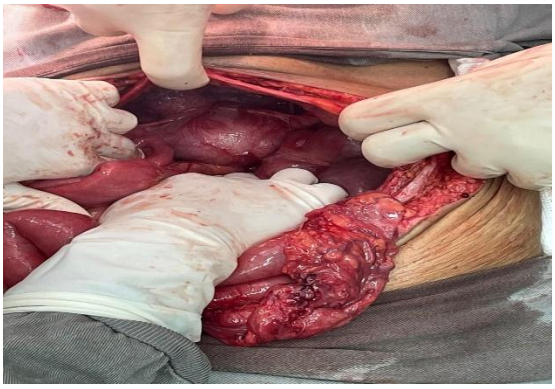
Placenta completely detached and thrombosed, confined to the amniotic sac, demonstrating prolonged tissue degeneration and absence of maternal–fetal perfusion



Subsequently, the General Surgery team performed a thorough inspection of the abdominal cavity, releasing fibrous bands and dense adhesions. The bowel loops showed signs of distress and diffuse dilation, but no segmental necrosis was identified. Intestinal decompression and manual milking were performed, with drainage of fecaloid content and repair of the stenotic segment, without the need for enterectomy. Fecaloid intestinal content was drained through an orogastric tube, resulting in resolution of the distension. After final inspection and hemostasis, the abdominal cavity was closed in layers.

Figure 6

Pelvic view demonstrating an intact uterus and fallopian tubes following removal of the fetus from the abdominal cavity, consistent with secondary abdominal pregnancy



In the immediate postoperative period, the patient was transferred to the intensive care unit (ICU), where she was conscious but drowsy, hypothermic, and with the surgical wound properly dressed. Laboratory tests performed on October 6 showed creatinine 1.7 mg/dL, C-reactive protein 60.9 mg/L, potassium 3.5 mEq/L, urea 51 mg/dL, and leukocytosis of 11,370/mm³, consistent with a systemic inflammatory response and fluid–electrolyte imbalance.

Antibiotic therapy with ceftriaxone and metronidazole was initiated, along with treatment for syphilis using benzathine penicillin. The patient progressed favorably, remaining in the ICU only during the first 24 hours under joint supervision of the General Surgery and Obstetrics teams. She was transferred to the obstetrics ward the following day, with progressive clinical improvement and continued multidisciplinary follow-up until hospital discharge.

Ethical Considerations: This case report was conducted in accordance with the ethical principles of the Declaration of Helsinki (2013) and the guidelines of the Brazilian National Health Council (CNS Resolution No. 466/2012). The patient was fully informed about the objectives of the report and provided written informed consent authorizing the use

of her clinical data and images exclusively for scientific purposes, with assurance of anonymity and confidentiality.

3 DISCUSSION

Abdominal ectopic pregnancy poses a significant diagnostic challenge due to the heterogeneity of its clinical presentation and its resemblance to gastrointestinal or urinary disorders. Clinical manifestations are often insidious, and diagnosis relies heavily on careful ultrasonographic evaluation and a detailed obstetric history (Maggonage *et al*., 2024; McDougall *et al*., 2022).

In the present case, the examination performed on May 11 had already raised suspicion of an abdominal pregnancy that warranted further investigation. However, the absence of medical follow-up resulted in prolonged fetal retention lasting approximately five months. This interval characterizes a chronic form of the condition, frequently described in historical reports of lithopedion, a situation in which the deceased fetus is partially reabsorbed and may undergo calcification, remaining in the maternal abdomen for years (Mitra *et al*., 2015). In contrast, in this case, the fetus remained structurally intact and was surrounded by an intense inflammatory reaction, leading to the formation of fibrotic bands and intestinal adhesions, findings consistent with a chronic fibrotic response to necrotic intra-abdominal tissue. Similar presentations have been described as early stages of fetal calcification prior to complete lithopedion formation, suggesting a continuum between inflammatory response and dystrophic degeneration of the conceptus (Mirzaei *et al*., 2023; Mitra *et al*., 2015).

The presence of an obstructive acute abdomen in association with suspected abdominal pregnancy prompted surgical intervention. Laparotomy revealed diffuse adhesions and mechanical small bowel obstruction, representing a severe complication of prolonged intra-abdominal fetal retention. In comparable scenarios, the literature recommends individualized surgical management, taking into account the risk of massive hemorrhage and injury to adjacent organs (Maggonage *et al*., 2024).

Another relevant aspect concerns the patient's social and behavioral profile. Illicit drug use, lack of prenatal care, and a history of violence constitute a context of vulnerability that further contributes to the clinical invisibility of these women. Studies indicate that socioeconomic factors, such as low educational attainment, social marginalization, and stigma related to substance use, limit access to healthcare services and delay the diagnosis of potentially life-threatening conditions (Grand-Guillaume-Perrenoud; Origlia; Cignacco, 2022; Kim *et al*., 2018).

From a pathophysiological standpoint, prolonged contact between the deceased fetus and abdominal tissues may trigger the release of inflammatory cytokines, reactive fibrosis, and dense adhesions, as observed in this case (Mirzaei *et al*., 2023). Furthermore, placental thrombosis and the absence of amniotic fluid are clear indicators of prolonged gestational tissue degeneration, which explains the marked elevation of C-reactive protein and postoperative leukocytosis.

In terms of management, early surgical treatment is considered the safest approach once abdominal pregnancy with fetal demise is diagnosed, aiming to prevent infectious and obstructive complications (Singh *et al*., 2016). Intensive postoperative care and the use of broad-spectrum antibiotics, as implemented in this case, are essential to reduce the risk of sepsis and peritonitis (Maggonage *et al*., 2024).

From an ethical and social perspective, this case also underscores the importance of multidisciplinary and intersectoral follow-up. Situations involving social vulnerability, substance use, and inadequate prenatal care require coordinated action among healthcare services, social assistance, and public policies aimed at patient support and protection (Diakite *et al*., 2025).

Thus, beyond its clinical and surgical relevance, this report invites reflection on systemic failures that allow severe conditions to progress without timely intervention. Comprehensive reproductive healthcare must incorporate active listening, supportive care, and continuous surveillance, particularly among high-risk populations.

4 CONCLUSION

Advanced abdominal ectopic pregnancy with prolonged fetal demise is a rare condition associated with considerable diagnostic complexity and significant risk to maternal life. The present case illustrates an atypical clinical course in which the fetus remained retained within the abdominal cavity for several months, ultimately culminating in acute intestinal obstruction.

The absence of follow-up after the initial obstetric event, combined with the patient's socially vulnerable context, contributed to delayed presentation and increased clinical severity. Diagnosis and treatment required a multidisciplinary approach involving both obstetrics and general surgery, resulting in a favorable maternal outcome.

Beyond its medical implications, this report highlights the need to strengthen longitudinal care for women of reproductive age, including early screening for atypical pregnancies, careful evaluation of nonspecific symptoms, and improved integration across levels of healthcare. Ultimately, this case demonstrates that weaknesses in support

networks and social stigma may be as determinant as biological factors in the development of severe obstetric complications.

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