World Journal of Clinical Cases

Submit a Manuscript: https://www.f6publishing.com

World J Clin Cases 2026 February 26; 14(6): 118135

DOI: 10.12998/wjcc.v14.i6.118135

ISSN 2307-8960 (online)

CASE REPORT

Ruptured primary intrahepatic ectopic pregnancy: A case report and review of literature

Gajendra Bhati, Federico Maria Mongardini, Kamna Bhati, Pushpinder Singh, Raghav Bansal, Ayush Bansal, Samridhi Mahajan, Ludovico Docimo, Marco Caricato, Gabriella Teresa Capolupo, Filippo Carannante

Provenance and peer review: Invited article; Externally peer reviewed.
Peer-review model: Single blind
Peer-review report's classification
Novelty: Grade C, Grade D
P-Reviewer: Giorgio A, MD, Chief Physician, Professor, Italy
Received: December 25, 2025
Revised: December 31, 2025
Accepted: January 22, 2026
Published online: February 26, 2026
Processing time: 50 Days and 10.6 Hours

Gajendra Bhati, Department of Surgical Gastroenterology and Hepatopancreatobiliary Surgery, Adesh Institute of Medical Sciences and Research, Bathinda Punjab, Bathinda 151101, Punjab, India

Federico Maria Mongardini, Department of General, Mininvasive, Oncologic and Obesity Surgery, University of Campania "Luigi Vanvitelli," Naples 80131, Italy

Kamna Bhati, Department of Dietetics, All India Institute of Medical Sciences and Research, Bathinda 151001, Punjab, India

Pushpinder Singh, Department of Radiodiagnostic, Adesh Institute of Medical Sciences and Research, Bathinda 151001, Punjab, India

Raghav Bansal, Samridhi Mahajan, Adesh Institute of Medical Sciences and Research, Bathinda 151001, Punjab, India

Ayush Bansal, Adesh Institute of Dental Sciences and Research, Bathinda 151001, India

Ludovico Docimo, Department of Surgery, XI Division of General, Minivasive and Obesity Surgery Master of Coloproctology and Master of Pelvi-Perineal Rehabilitation, Napoli 80100, Napoli, Italy

Marco Caricato, Gabriella Teresa Capolupo, Filippo Carannante, UOC Chirurgia Colorettale, Fondazione Policlinico Campus Bio-Medico di Roma, Roma 00128, Italy

ORCID number: Gajendra Bhati 0000-0002-8248-2781; Federico Maria Mongardini 0000-0003-4980-0335; Ludovico Docimo 0000-0001-5587-9452; Marco Caricato 0000-0002-5610-1615; Gabriella Teresa Capolupo 0000-0002-6009-8180; Filippo Carannante 0000-0003-3618-8431.

Co-corresponding authors: Raghav Bansal and Filippo Carannante.

Corresponding author: Filippo Carannante, MD, PhD, Academic Fellow, Additional Professor, FACS, UOC Chirurgia Colorettale, Fondazione Policlinico Campus Bio-Medico, Via Alvaro del Portillo 200 Policlinico Campus Bio-Medico di Roma, Roma 00128, Italy. f.carannante@unicampus.it

Abstract

BACKGROUND

Primary hepatic ectopic pregnancy is an exceptionally rare subtype of abdominal ectopic pregnancy and carries a very high risk of catastrophic hemorrhage. Due to its atypical clinical presentation and unusual implantation site, diagnosis is often delayed, leading to significant maternal morbidity and mortality.

CASE SUMMARY

A woman of reproductive age presented with acute upper abdominal pain and hemorrhagic shock. Pregnancy testing was positive, and transabdominal ultrasonography revealed massive hemoperitoneum with the absence of intrauterine gestation. Focused abdominal ultrasound demonstrated a heterogeneous lesion arising from the right hepatic lobe, suspicious for ruptured intrahepatic ectopic pregnancy. Initially, a diagnostic laparoscopy was performed but due to hypotension and anesthetist advice, emergency exploratory laparotomy was performed, and a ruptured intrahepatic gestational mass was identified. Complete surgical excision with hemostasis was achieved. Histopathology confirmed intrahepatic ectopic pregnancy. The postoperative course was uneventful.

CONCLUSION

Prompt recognition, appropriate imaging sequence, and emergency surgical intervention are essential to prevent maternal mortality in hepatic ectopic pregnancy.

Key Words: Hepatic ectopic pregnancy; Abdominal ectopic pregnancy; Acute abdomen; Hemorrhagic shock; Liver implantation; Case report

Core Tip: Primary hepatic ectopic pregnancy is an extremely rare but life-threatening condition. In pregnant patients presenting with acute abdomen and hemoperitoneum without intrauterine gestation, hepatic implantation must be considered. Early imaging and immediate surgical management are crucial to prevent fatal hemorrhaging.

Citation: Bhati G, Mongardini FM, Bhati K, Singh P, Bansal R, Bansal A, Mahajan S, Docimo L, Caricato M, Capolupo GT, Carannante F. Ruptured primary intrahepatic ectopic pregnancy: A case report and review of literature. *World J Clin Cases* 2026; 14(6): 118135

URL: https://www.wjgnet.com/2307-8960/full/v14/i6/118135.htm

DOI: https://dx.doi.org/10.12998/wjcc.v14.i6.118135

INTRODUCTION

Ectopic pregnancy occurs in approximately 1%-2% of all pregnancies with abdominal ectopic pregnancy accounting for nearly 1% of ectopic cases[1,2]. Primary abdominal ectopic pregnancy is defined by direct implantation on a peritoneal surface[3,4] as described by Studdiford's criteria[5]. Among abdominal implantations, hepatic ectopic pregnancy represents one of the rarest and most dangerous forms due to the extensive vascularity of the liver and the associated risk of massive hemorrhage[2-4].

CASE PRESENTATION

Chief complaints

Acute onset of severe upper abdominal pain associated with dizziness and syncope.

History of present illness

The patient developed sudden epigastric and right upper quadrant pain a few hours before admission that was associated with nausea, vomiting, and presyncope. The pain progressively worsened and was not preceded by trauma. There was recent amenorrhea and no vaginal bleeding. At the time of presentation, the patient was not aware of being pregnant and reported no previous symptoms suggestive of pregnancy.

History of past illness

No previous ectopic pregnancy, pelvic inflammatory disease, assisted reproductive techniques, or abdominal surgery were reported

Personal and family history
No previous diseases were reported.

Physical examination
The patient appeared pale and diaphoretic. Her blood pressure was low with tachycardia, consistent with hemorrhagic shock. Abdominal examination revealed diffuse tenderness with guarding that was more pronounced in the upper abdomen.

Laboratory examinations
Hemoglobin was 6.9 g/dL. Serum β-human chorionic gonadotropin level was 43760 IU/mL (Table 1).

Imaging examinations
Urgent abdominal ultrasonography was performed as the first-line imaging modality in the emergency setting. Ultrasound examination revealed a large volume of free intraperitoneal fluid, consistent with massive hemoperitoneum, and the absence of intrauterine gestation. Transvaginal ultrasonography confirmed the absence of intrauterine pregnancy and demonstrated normal adnexal structures.

Focused abdominal ultrasonography further identified a heterogeneous, irregular lesion with mixed echogenicity arising from the right hepatic lobe that was associated with surrounding free fluid, suggestive of an actively bleeding hepatic source (Figure 1). Based on the ultrasonographic findings and the patient's hemodynamic instability, a diagnosis of ruptured intrahepatic ectopic pregnancy was suspected[6,7].

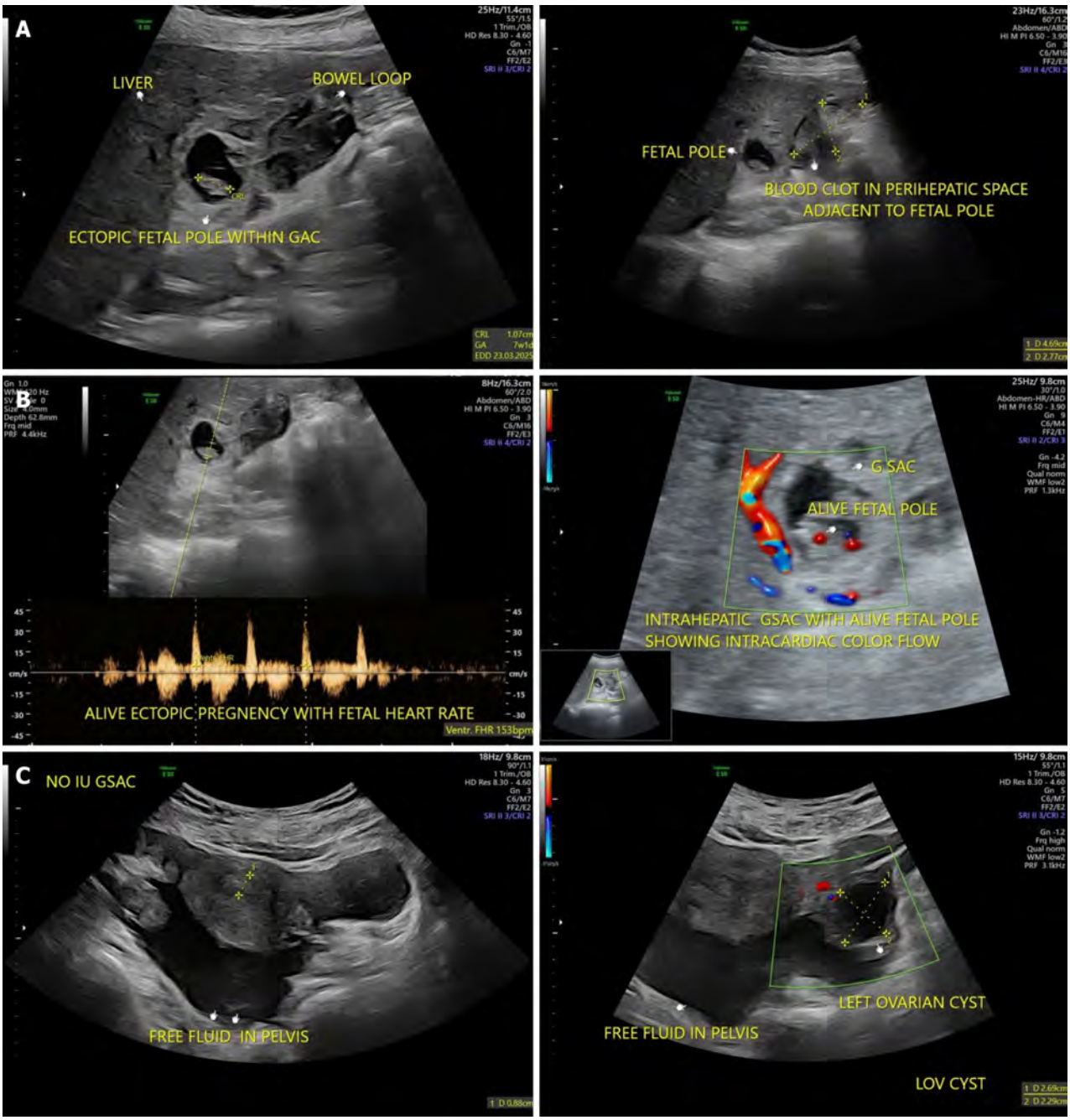

Figure 1 Abdominal ultrasound. A: Ultrasound imaging demonstrated a large volume of free intraperitoneal fluid that was consistent with massive hemoperitoneum; B: Live ectopic pregnancy with positive fetal heart rate. Doppler study showed intracardiac color flow; C: Focused abdominal ultrasonography of the liver. Ultrasound imaging showed a heterogeneous lesion with mixed echogenicity arising from the right hepatic lobe that was suspicious of ectopic gestational implantation.

FINAL DIAGNOSIS

Ruptured primary intrahepatic ectopic pregnancy.

TREATMENT

Initially, a diagnostic laproscopy was performed but due to hypotension and anesthetist advice emergency exploratory laparotomy was performed. A ruptured gestational mass embedded within the right hepatic lobe was identified as the source of active bleeding (Figures 2 and 3). Complete excision of the ectopic tissue and meticulous hemostasis were achieved.

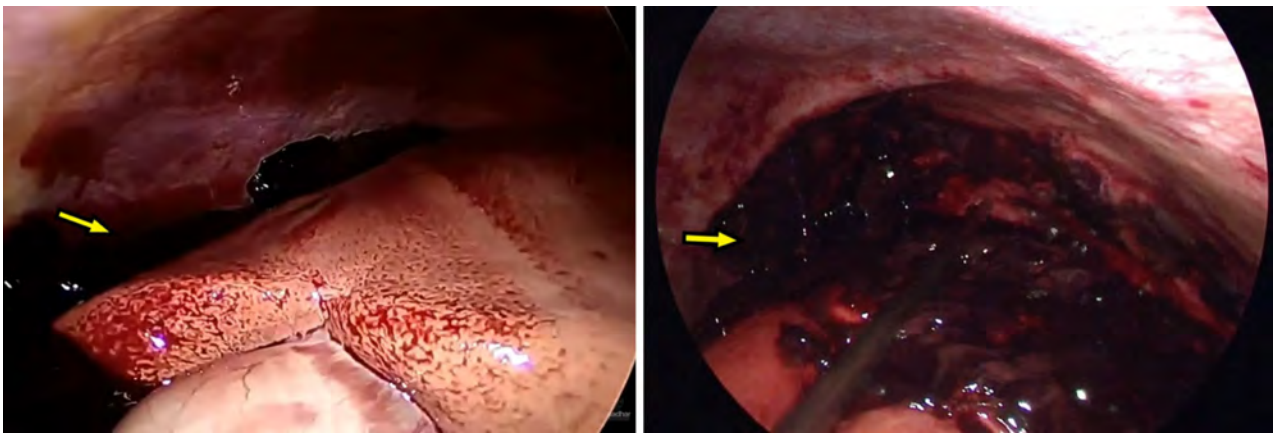

Figure 2 Intraoperative findings during diagnostic laparoscopy. Intraoperative view of active bleeding from a ruptured gestational mass embedded within the hepatic parenchyma (arrows).

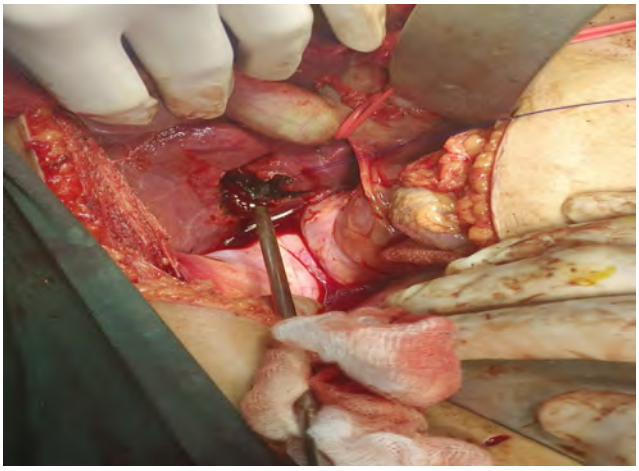

Figure 3 Surgical specimen. Excised ectopic gestational tissue obtained from the liver surface following surgical hemostasis.

OUTCOME AND FOLLOW-UP

Postoperative recovery was uneventful with rapid hemodynamic stabilization (Table 2). Histopathological examination demonstrated chorionic villi within the hepatic parenchyma, confirming the diagnosis (Figures 4 and 5). Follow-up imaging showed satisfactory liver healing.

DISCUSSION

Primary intrahepatic ectopic pregnancy is an exceptionally rare form of abdominal ectopic gestation and is associated with a very high risk of life-threatening hemorrhage[1,2]. Abdominal ectopic pregnancies account for approximately 1% of all ectopic pregnancies, and hepatic implantation represents one of the least frequent and most dangerous sites described in the literature[1,3]. To date, fewer than 50 cases of hepatic ectopic pregnancy have been reported worldwide. Most of them present as surgical emergencies due to rupture and massive hemoperitoneum[2,4,5].

The clinical presentation is often nonspecific and may mimic other causes of acute abdomen, including hepatobiliary disorders or spontaneous intra-abdominal bleeding[6]. For this reason, diagnosis is frequently delayed. In emergency settings ultrasonography represents the first-line imaging modality and often the only immediately available diagnostic tool, particularly in patients who are hemodynamically unstable[7]. As reported in several published cases, transabdominal ultrasound is usually sufficient to demonstrate free intraperitoneal fluid, exclude intrauterine pregnancy, and suggest an extrauterine source of bleeding[8,9]. In the present case ultrasonography revealed massive hemoperitoneum together with a heterogeneous lesion arising from the right hepatic lobe. These findings are consistent with previously described sonographic features of hepatic ectopic pregnancy[10,11].

Table 1 Blood examination

Investigations	Value	Normal range
Hemoglobin	6.9 g/dL	13.0-17.0
TLC	9.3 × 10^3/μL	4.0-10.0
Platelets	118.0 × 10^3/μL	80.0-140.0
Liver function tests		
Serum GOT	43.0 IU/L	0.0-35.0
Serum GPT	35.0 IU/L	0.0-41.0
ALP	102.0 IU/L	40.0-129.0
Albumin	2.8 g/dL	3.5-5.2
Bilirubin	0.4 mg/dL	0.1-1.2
Renal function tests		
Serum urea	43.0 mg/dL	17.0-43.0
Serum creatinine	0.6 mg/dL	0.6-1.1
Serum uric acid	3.2 mg/dL	2.6-6.0
Serum Na^+	139.0 mmol/L	136.0-145.0
Serum K^+	3.4 mmol/L	3.5-5.0
Viral markers		
HCV	Non-reactive	
HBsAg	Non-reactive	
HIV	Non-reactive	
β-hCG	43760 IU/mL	

TLC: Total lymphocyte count; ALP: Alkaline phosphatase; GOT: Serum glutamic oxaloacetic transaminase; GPT: Glutamic pyruvic transaminase; hCG: Human chorionic gonadotropin; HCV: Hepatitis C virus; HBsAg: Hepatitis B surface antigen.

Table 2 Postoperative day 1 blood exams

Investigations	Value	Normal range
Hemoglobin	9.0 g/dL	13.0-17.0
TLC	8.1 × 10^3/μL	4.0-10.0
Platelets	110.0 × 10^3/μL	80.0-140.0
Electrolytes		
Serum Na^+	139.0 mmol/L	136.0-145.0
Serum K^+	3.5 mmol/L	3.5-5.0
β-hCG	3333 IU/mL	

TLC: Total lymphocyte count; hCG: Human chorionic gonadotropin.

A critical point that deserves clear explanation for readers concerns the mechanism by which the gestational sac becomes implanted in the liver. Although the exact pathogenesis remains uncertain, several hypotheses have been proposed in the literature. The most widely accepted theory suggests primary peritoneal implantation of the fertilized ovum, followed by trophoblastic invasion of the hepatic surface[12,13]. From an anatomical and physiological perspective, the liver, particularly the right lobe, may represent a permissive site for implantation because of its large surface area, relatively fixed position, and rich vascular supply that can support early trophoblastic development[14,15].

An alternative mechanism involves secondary implantation after early tubal abortion whereby the conceptus detaches from the fallopian tube and subsequently reimplants on the hepatic capsule or subcapsular parenchyma[16]. However, many reported cases[17,18], including the present one, describe normal adnexa and fallopian tubes at surgical ex-

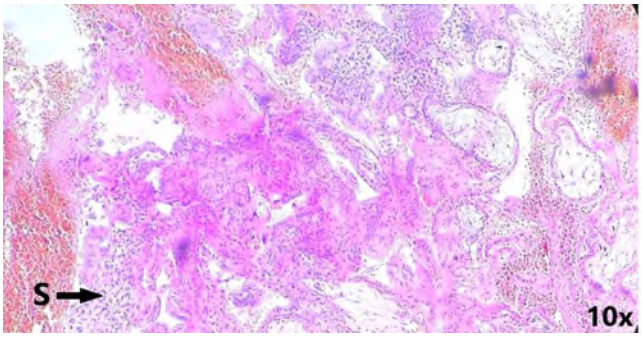

Figure 4 Histopathological examination. Microscopic image of chorionic villi embedded within the hepatic tissue, confirming the diagnosis of intrahepatic ectopic pregnancy (hematoxylin and eosin staining, × 100).

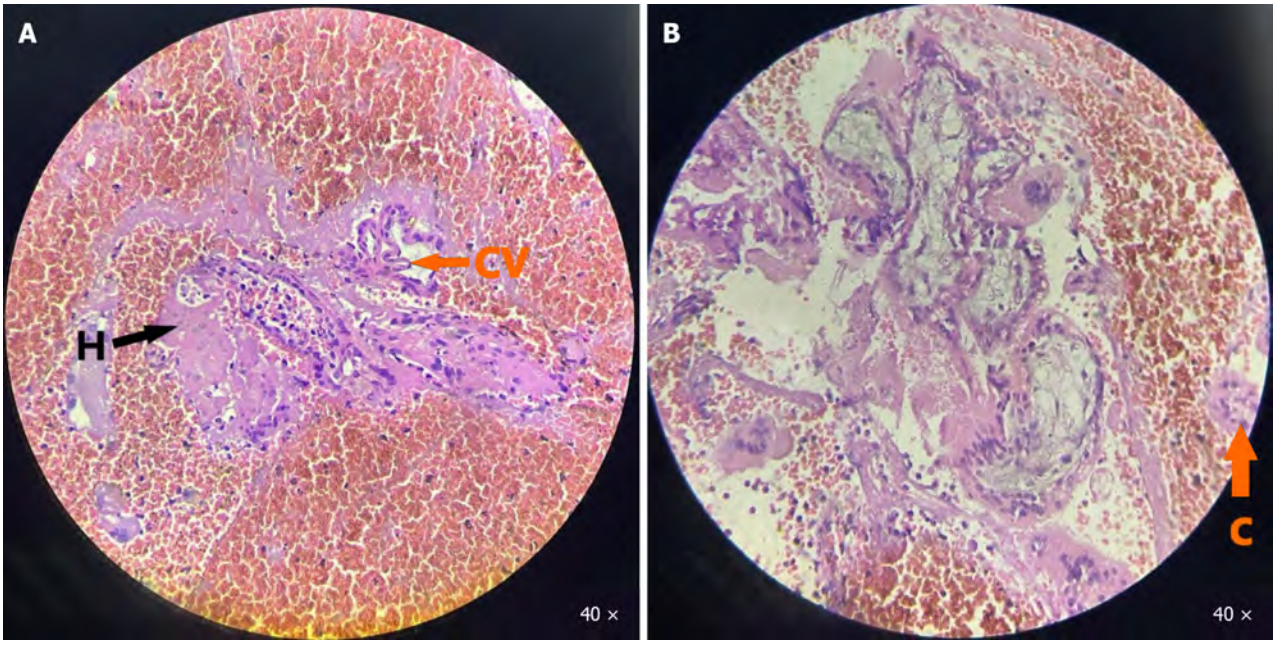

Figure 5 Histopathological examination. A: Magnification (× 40) magnification of hepatocytes (black arrow) and chorionic villi (orange arrow) with peripheral area of necrosis and hemorrhage; B: Cytotrophoblasts visualized (orange arrow) along with inflammatory infiltrates. S: Synctiotrophoblasts; H: Hepatocytes; CV: Chorionic villi; C: Cytotrophoblasts.

ploration, fulfilling Studdiford's criteria for primary abdominal ectopic pregnancy[19,20]. These findings favor the hypothesis of true primary hepatic implantation rather than secondary reimplantation (Table 3)[21-30].

From an imaging standpoint ultrasonography can indirectly support these pathogenetic considerations. The demonstration of an extrauterine gestational lesion closely related to the hepatic surface, together with the absence of adnexal pathology, supports the concept of primary abdominal implantation[10,18]. Moreover, the identification of a heterogeneous or mixed echogenic hepatic lesion associated with hemoperitoneum should raise suspicion of hepatic ectopic pregnancy, especially in pregnant patients presenting with acute upper abdominal pain and signs of hemorrhagic shock[9,11].

Management strategies reported in the literature largely depend on the patient's hemodynamic status. Conservative treatment with systemic methotrexate has been described in selected stable cases, but this approach carries a significant risk of delayed rupture and hemorrhage[19]. Consequently, emergency surgical intervention remains the treatment of choice in ruptured hepatic ectopic pregnancy as delayed diagnosis and treatment are associated with high maternal mortality rates[20]. The present case highlighted the importance of rapid ultrasound-based assessment followed by prompt surgical exploration to achieve a favorable outcome.

Strengths and limitations

The main strength of this case report was the description of an exceptionally rare and life-threatening condition supported by ultrasonographic findings, intraoperative confirmation, and histopathological diagnosis, together with a focused review of the available literature. The main limitation was the single-case nature of the report that is inherent to the extreme rarity of hepatic ectopic pregnancy and limits the generalizability of the conclusions.

Table 3 Literature review of all cases of primary hepatic pregnancy from the last 10 years

Ref.	Age	Symptoms	Investigation/findings	Management	Points
Zhao *et al*[21], 2017	21	Vaginal bleeding with no abdominal pain and 14-week pregnancy	β-hCG: 135755.00 IU/L, USG abdomen revealed a live 14-week fetus attached to the undersurface of the left hepatic lobe. CT scan showed a 7 cm fetus between left liver lobe and gall bladder	Laparoscopy excision and extraction of the amniotic sac as well as a 12-cm long fetus	N/A
Yin *et al*[22], 2018	28	Abdominal pain and RUQ tenderness, amenorrhea for 30 days	β-hCG: 1579 IU/mL, USG abdomen revealed 74 mm × 31 mm with an uneven high echo at recessus hepatorenalis. CT revealed a mass in the right hepatic lobe	Laparotomy and removal of the ectopic foci along with the clots	A contraceptive ring had been placed in the uterine cavity 3 years prior
Garzon *et al* [23], 2018	37	Vaginal bleeding and amenorrhea for 9 weeks	β-hCG: 8707 IU/mL, USG abdomen revealed a mixed echogenic mass in the hepatic area. CT scan showed hemoperitoneum and a round 25-mm lesion in the VI hepatic segment	Retroperitoneal laparoscopic approach with visualization of the ectopic tissue in segment VI, subsequent excision of the foci and hemostasis were achieved with 3800 mL intraoperative blood loss	Inconclusive initial diagnostic laparoscopy leading to re-exploration and additional surgery
He *et al*[24], 2019	23	Persistent dullness and abdominal pain in RUQ	USG abdomen revealed 11.0 cm × 8.9 cm mixed cystic and solid hyperechoic mass attached to the right liver lobe	N/A	History of cesarean section and intake of oral contraceptives within 6-months of presentation
Zhang *et al* [25], 2020	30	Vaginal bleeding and amenorrhea for 63 days	β-hCG: 17193 IU/mL, USG abdomen revealed mixed echogenic mass in the hepatic area. CT revealed a lesion of 29 mm × 23 mm × 25 mm in hepatic segment VI	Laparoscopic exploration revealed a round 25-mm ectopic pregnancy lesion in hepatic segment IV, followed by open resection of the ectopic foci	Patient had polycystic ovary syndrome
Yang *et al*[27], 2024	30s	Lumbar and abdominal pain	β-hCG: 2244 IU/mL, MRI abdomen showed a quasicircular high signal inside with a diameter of 20 mm near the right lobe of the liver close to the diaphragm	Laparoscopic removal of the blood clots and electrocoagulation of the bleeding site near segment VI and diaphragm. Final diagnosis of the patient was diaphragmatic adhesion secondary to liver ectopic pregnancy loss	History of one previous induced abortion following pregnancy achieved through assisted reproductive technique
Beck *et al*[26], 2024	24	Abdominal pain in RUQ	β-hCG: 3702 IU/mL, USG abdomen revealed inhomogeneous tumor measuring 9 cm × 5 cm × 4 cm, attached to the right lobe of the liver	8 weeks after methotrexate, robotic-assisted tumor resection was performed	Final histopathological examination unveiled chorionic villi in a state of severe regression confirming the diagnosis of abdominal ectopic gravidity
Yusuf *et al* [28], 2024	35	Severe dull pain in right hypochondrium with multiple episodes of vomiting and amenorrhea for 3 months	β-hCG: 168100 IU/mL, USG abdomen revealed a single, smoothly contoured gestational sac in the right hepatic lobe, containing a fetus with FHR+. The gestational age, based on crown-rump length, was measured at 5.75 cm, corresponding to 12 weeks	Wedge segmental resection of segment VI, Pringle maneuver and hepatic packing for hemostasis	History of previous cesarean section
Rajanbabu *et al*[20], 2024	33	Abdominal pain	β-hCG: 18336 IU/mL, USG abdomen showed a hyperechoic lesion with echogenic components suspicious of an ectopic pregnancy with a fetal pole but absent FHR	A small segment of the liver along with the ectopic foci were excised	2 previous cesarean sections
Manzaneda-Peralta *et al* [29], 2025	30	Abdominal pain and hemorrhagic shock	β-hCG: 55710 mUI/mL, USG abdomen revealed presence of rounded image with defined contours in the right hepatic lobe, containing a fetus of 13 weeks, movements+ and FHR+	Exploratory laparotomy with hepatic wedge resection and Pringle maneuver and hepatic packing for hemostasis	No history of previous pregnancy
Anant *et al* [30], 2025	30	Recurrent right hypochondrial pain and vomiting lasting 3 months	MRI abdomen revealed a complete 12-week fetus attached to the inferior surface of segment VI of the right lobe of the liver	Right paramedian incision, gestational sac and a well-formed fetus were identified over segment VI and were removed	1-year follow-up revealed an avascular 13-week gestational sac in the liver

β-hCG: Human chorionic gonadotropin; N/A: Not applicable; RUQ: Right upper quadrant; USG: Ultrasonography; FHR: Fetal heart rate; MRI: Magnetic resonance imaging.

CONCLUSION

Primary hepatic ectopic pregnancy is a rare but potentially fatal cause of acute abdomen. Early recognition, appropriate imaging sequencing, and prompt surgical management are essential to improve maternal outcomes.

REFERENCES

1 **Bouyer J**, Coste J, Fernandez H, Pouly JL, Job-Spira N. Sites of ectopic pregnancy: a 10 year population-based study of 1800 cases. *Hum Reprod* 2002; **17**: 3224-3230 [*RCA*] [PMID: 12456628 DOI: 10.1093/humrep/17.12.3224] [FullText]

2 **Atrash HK**, Friede A, Hogue CJ. Abdominal pregnancy in the United States: frequency and maternal mortality. *Obstet Gynecol* 1987; **69**: 333-337 [*RCA*] [PMID: 3822281] [FullText]

3 **Hallatt JG**, Grove JA. Abdominal pregnancy: a study of twenty-one consecutive cases. *Am J Obstet Gynecol* 1985; **152**: 444-449 [*RCA*] [PMID: 4014337 DOI: 10.1016/s0002-9378(85)80155-1] [FullText]

4 **Costa SD**, Presley J, Bastert G. Advanced abdominal pregnancy. *Obstet Gynecol Surv* 1991; **46**: 515-525 [*RCA*] [PMID: 1886705 DOI: 10.1097/00006254-199108000-00003] [FullText]

5 **SCADRON EN**. Primary peritoneal pregnancy. *Am J Obstet Gynecol* 1957; **73**: 686-689 [*RCA*] [PMID: 13402838 DOI: 10.1016/s0002-9378(16)37442-7] [FullText]

6 **Gerli S**, Rossetti D, Baiocchi G, Clerici G, Unfer V, Di Renzo GC. Early ultrasonographic diagnosis and laparoscopic treatment of abdominal pregnancy. *Eur J Obstet Gynecol Reprod Biol* 2004; **113**: 103-105 [*RCA*] [PMID: 15036722 DOI: 10.1016/S0301-2115(03)00366-X] [Full Text]

7 **Chuprin A**, Beavers NT, Fong V, Vingan H, Aggarwal A. Percutaneous transgluteal computed tomography-guided aspiration of obturator internus pyomyositis in adolescent athlete: A case report and literature review. *Radiol Case Rep* 2018; **13**: 1123-1127 [*RCA*] [PMID: 30233741 DOI: 10.1016/j.radcr.2018.08.007] [FullText] [Full Text(PDF)]

8 **Omland AK**, Abyholm T, Fedorcsák P, Ertzeid G, Oldereid NB, Bjercke S, Tanbo T. Pregnancy outcome after IVF and ICSI in unexplained, endometriosis-associated and tubal factor infertility. *Hum Reprod* 2005; **20**: 722-727 [*RCA*] [PMID: 15591078 DOI: 10.1093/humrep/deh664] [FullText]

9 **Clayton HB**, Schieve LA, Peterson HB, Jamieson DJ, Reynolds MA, Wright VC. Ectopic pregnancy risk with assisted reproductive technology procedures. *Obstet Gynecol* 2006; **107**: 595-604 [*RCA*] [PMID: 16507930 DOI: 10.1097/01.AOG.0000196503.78126.62] [Full Text]

10 **Wang C**, Cheng L, Zhang Z, Yuan Z. Imaging diagnosis of hepatic ectopic pregnancy: A report of one case. *Intractable Rare Dis Res* 2012; **1**: 40-44 [*RCA*] [PMID: 25343072 DOI: 10.5582/irdr.2012.v1.1.40] [FullText]

11 **Chui AK**, Lo KW, Choi PC, Sung MC, Lau JW. Primary hepatic pregnancy. *ANZ J Surg* 2001; **71**: 260-261 [*RCA*] [PMID: 11355741 DOI: 10.1046/j.1440-1622.2001.02085.x] [FullText]

12 **Moores KL**, Keriakos RH, Anumba DO, Connor ME, Lashen H. Management challenges of a live 12-week sub-hepatic intra-abdominal pregnancy. *BJOG* 2010; **117**: 365-368 [*RCA*] [PMID: 20015307 DOI: 10.1111/j.1471-0528.2009.02450.x] [FullText]

13 **Shippey SH**, Bhoola SM, Royek AB, Long ME. Diagnosis and management of hepatic ectopic pregnancy. *Obstet Gynecol* 2007; **109**: 544-546 [*RCA*] [PMID: 17267889 DOI: 10.1097/01.AOG.0000247293.32523.c3] [FullText]

14 **Dubinsky TJ**, Guerra F, Gormaz G, Maklad N. Fetal survival in abdominal pregnancy: a review of 11 cases. *J Clin Ultrasound* 1996; **24**: 513-517 [PMID: 8906483 DOI: 10.1002/(SICI)1097-0096(199611/12)24:9<513::AID-JCU4>3.0.CO;2-Q] [FullText]

15 **Nkusu Nunyalulendho D**, Einterz EM. Advanced abdominal pregnancy: case report and review of 163 cases reported since 1946. *Rural Remote Health* 2008; **8**: 1087 [*RCA*] [PMID: 19053177] [FullText]

16 **Sunday-Adeoye I**, Twomey D, Egwuatu EV, Okonta PI. A 30-year review of advanced abdominal pregnancy at the Mater Misericordiae Hospital, Afikpo, southeastern Nigeria (1976-2006). *Arch Gynecol Obstet* 2011; **283**: 19-24 [*RCA*] [PMID: 19876640 DOI: 10.1007/s00404-009-1260-4] [FullText]

17 **Opare-Addo HS**, Deganus S. Advanced abdominal pregnancy: a study of 13 consecutive cases seen in 1993 and 1994 at Komfo Anokye Teaching Hospital, Kumasi, Ghana. *Afr J Reprod Health* 2000; **4**: 28-39 [*RCA*] [PMID: 11000706] [FullText]

18 **O'Neill SM**, Khashan AS, Kenny LC, Greene RA, Henriksen TB, Lutomski JE, Kearney PM. Caesarean section and subsequent ectopic pregnancy: a systematic review and meta-analysis. *BJOG* 2013; **120**: 671-680 [*RCA*] [PMID: 23398899 DOI: 10.1111/1471-0528.12165] [Full Text]

19 **Tu J**, Wang E, Shen J. Primary Hepatic Ectopic Pregnancy: A Case Report. *J Reprod Med* 2016; **61**: 175-178 [*RCA*] [PMID: 27172643] [Full Text]

20 **Rajanbabu M**, Ma K, Shuheibar H, Somoye G, Sirkeci F, Bandyopadhyay SK, Sheen AJ. Primary Hepatic Ectopic Pregnancy: Diagnosis and Laparoscopic Management. *J Minim Invasive Gynecol* 2024; **31**: 178-179 [*RCA*] [PMID: 38030033 DOI: 10.1016/j.jmig.2023.11.017] [Full Text]

21 **Zhao RF**, Huang SR, Xu LL, Liu NP, Liang N. Successful Management of a Live 14-week Primary Hepatic Ectopic Pregnancy Combined with a Residual Horn of the Uterus Using Laparoscopy. *Chin Med J (Engl)* 2017; **130**: 3013-3014 [*RCA*] [PMID: 29237941 DOI: 10.4103/0366-6999.220298] [FullText] [Full Text(PDF)]

22 **Yin H**, Liu Y, Cao Y, Zhang M, Wang T, Wang Z, Wu J, Yu T, Lu W. Primary hepatic pregnancy. *QJM* 2018; **111**: 411-413 [*RCA*] [PMID: 29579242 DOI: 10.1093/qjmed/hcy063] [FullText]

23 **Garzon S**, Raffaelli R, Montin U, Ghezzi F. Primary hepatic pregnancy: report of a case treated with laparoscopic approach and review of the literature. *Fertil Steril* 2018; **110**: 925-931.e1 [*RCA*] [PMID: 30316439 DOI: 10.1016/j.fertnstert.2018.05.020] [FullText]

24 **He S**, Cheng Y, Zhang G, Qi H, Sun Q. Primary hepatic pregnancy: a case report with a history of cesarean section and oral contraceptives, with review of literature. *Int J Clin Exp Pathol* 2019; **12**: 4344-4348 [*RCA*] [PMID: 31933836] [FullText]

25 **Zhang N**, Yang L, Wang Y, Li X, Zhang C, Xu J. Primary hepatic ectopic pregnancy in a patient with polycystic ovary syndrome: A case report. *Medicine (Baltimore)* 2020; **99**: e19649 [*RCA*] [PMID: 32221090 DOI: 10.1097/MD.0000000000019649] [FullText] [Full Text(PDF)]

26 **Beck MH**, Sehouli J, Leppig JA, Knitter S, Pratschke J, Krenzien F. Multimodal management of ectopic hepatic pregnancy: a systematic review of the literature. *Arch Gynecol Obstet* 2024; **310**: 2345-2353 [*RCA*] [PMID: 39352540 DOI: 10.1007/s00404-024-07739-0] [FullText]

27 **Yang XC**, Fang M, Peng YG, Wang L, Ju R. Hepatic ectopic pregnancy with hemorrhage secondary diaphragmatic adhesion: A case report. *World J Hepatol* 2024; **16**: 1289-1296 [*RCA*] [PMID: 39351513 DOI: 10.4254/wjh.v16.i9.1289] [FullText] [Full Text(PDF)]

28 **Yusuf YM**, Endeshaw GT, Shifa BM, Abate BA, Buser AA, Mohammed MA, Yimer SA, Kebede YT, Mohammed BD. Management of primary hepatic pregnancy: A case report. *Case Rep Womens Health* 2024; **44**: e00668 [*RCA*] [PMID: 39687744 DOI: 10.1016/j.crwh.2024.e00668] [FullText]

29 **Manzaneda-Peralta M**, Morales-Rodriguez J, Ramos-Ocola E, Valdivia-López J, Alvarez-Delgadillo Y, Jiménez-Vera J, Fuenzalida-Valdivia J, Terreros-Abril K. Hemorrhagic Shock in Primary Hepatic Pregnancy: A Diagnostic and Surgical Challenge. *Case Rep Surg* 2025; **2025**: 5393611 [*RCA*] [PMID: 40881616 DOI: 10.1155/cris/5393611] [FullText] [Full Text(PDF)]

30 **Anant M**, Kumar S, Paswan A, Mondal S. Fate of hepatic ectopic pregnancy 1-year post-treatment: still visible. *BMJ Case Rep* 2025; **18**: e263157 [*RCA*] [PMID: 39933860 DOI: 10.1136/bcr-2024-263157] [FullText]

FOOTNOTES

Specialty type: Surgery

Country of origin: India

Author contributions: Bhati G and Bansal R were involved in patient management and surgical treatment; Singh P performed and interpreted the radiological investigations; Mongardini FM, Docimo L, Caricato M, and Capolupo GT provided surgical supervision and critical clinical input; Bhati K, Bansal A, and Mahajan S collected clinical data and performed the literature review; Carannante F conceived and designed the study, critically revised the manuscript for important intellectual content, and approved the final version; All authors read and approved the final manuscript. Bansal R and Carannante F jointly conceptualized and designed the study. Bansal R was primarily responsible for the clinical and surgical aspects of the case, including patient evaluation, diagnostic assessment, surgical decision-making, and intraoperative management. He coordinated the collection of clinical data and was responsible for drafting the case presentation with a focus on the clinical course and surgical findings. In addition, Bansal R conducted a comprehensive review of the literature and contributed substantially to the interpretation of clinical and imaging findings, integrating existing evidence into the discussion section. Carannante F played a leading role in the overall supervision and critical revision of the manuscript. He thoroughly reviewed all sections of the manuscript for scientific accuracy, clinical relevance, and editorial consistency, and supervised the entire revision process. Carannante F ensured alignment with the journal's requirements, coordinated the response to the editors' and peer reviewers' comments, and oversaw the final structure and content of the manuscript prior to submission. Both Bansal R and Carannante F made substantial and indispensable contributions to manuscript preparation, critical revision for important intellectual content, and final approval of the version to be published. They jointly take responsibility for the integrity of the work as a whole and for all aspects of the study. The complementary clinical, surgical, and academic contributions of Bansal R and Carannante F were essential for the completion of this manuscript. For these reasons, both authors qualify as co-corresponding authors.

Informed consent statement: Written informed consent was obtained from the patient for publication of this report and any accompanying images.

Conflict-of-interest statement: All authors declare that they have no conflicts of interest to disclose.

CARE Checklist (2016) statement: The authors have read the CARE Checklist (2016) and the manuscript was prepared and revised according to the CARE Checklist (2016).

S-Editor: Liu JH
L-Editor: Filipodia
P-Editor: Xu J

Published by **Baishideng Publishing Group Inc**
7041 Koll Center Parkway, Suite 160, Pleasanton, CA 94566, USA
Telephone: +1-925-3991568
E-mail: office@baishideng.com
Help Desk: https://www.f6publishing.com/helpdesk
https://www.wjgnet.com