

Late Diagnosis of Abdominal Pregnancy: A Case Report from Segou Hospital in Mali

Tidiani Traoré^{1*}, Hamidou Toungara¹, Famakan Kané², Oumar S. Coulibaly¹, Kassoum Sidibé¹, Seydou Z. Dao³, Mamadou Touré¹, Seydou Traoré⁴, Brahim Donigolo¹, Babou Traoré¹, Adama Coulibaly¹, Abdourahmane Diarisso¹, Birama Traoré⁵, Alima Sidibé⁶, Amadou Bocoum⁷, Seydou Fané⁷, Youssouf Traoré⁷, Ibrahim Teguété⁷, Niani Mounkoro⁷, Amadou Dolo⁷

¹Ministry of Health in Bamako, Nianakoro Fomba Hospital, Segou, Mali

²Regional Health Department of Segou, District Hospital, Bla, Mali

³Regional Health Department of Bamako, Reference Health Center, Commune II, Bamako, Mali

⁴Regional Health Department of Koutiala, Reference Health Center, Koutiala, Mali

⁵Regional Health Department of Segou, District Hospital, San, Mali

⁶Ministry of Health in Bamako, Fousseyni Daou Hospital, Kayes, Mali

⁷Ministry of Health in Bamako, Gabriel Toure University Hospital Center, Bamako, Mali

Email: *tidiobongosso@yahoo.fr

How to cite this paper: Traoré, T., Toungara, H., Kané, F., Coulibaly, O.S., Sidibé, K., Dao, S.Z., Touré, M., Traoré, S., Donigolo, B., Traoré, B., Coulibaly, A., Diarisso, A., Traoré, B., Sidibé, A., Bocoum, A., Fané, S., Traoré, Y., Teguété, I., Mounkoro, N. and Dolo, A. (2024) Late Diagnosis of Abdominal Pregnancy: A Case Report from Segou Hospital in Mali. *Open Journal of Obstetrics and Gynecology*, 14, 1795-1800.

<https://doi.org/10.4236/ojog.2024.1412148>

Received: October 16, 2024

Accepted: Decemeber 6, 2024

Published: Decemeber 9, 2024

Copyright © 2024 by author(s) and Scientific Research Publishing Inc.

This work is licensed under the Creative Commons Attribution International License (CC BY 4.0).

<http://creativecommons.org/licenses/by/4.0/>



Open Access

Abstract

Abdominal pregnancy is a rare ectopic pregnancy in which the trophoblast implants in the peritoneal cavity. Diagnosis and management are difficult. We report the case of a 21-year-old primigravida, who consulted the hospital in Ségou for an abdominal pregnancy that had stopped at around 16 weeks. We performed a laparotomy and removed a gestational sac included in the left broad ligament containing a still-macerated female foetus weighing 145 g after a second ultrasound following the failure of induction with misoprostol for 48 hours. This case highlights the difficulty of diagnosing abdominal pregnancy in our environment despite the more frequent use of ultrasound.

Keywords

Pregnancy, Abdominal, Late, Mali

1. Introduction

Abdominal pregnancy is an extrauterine pregnancy (EUP) implanted in the peritoneal cavity. It accounts for 1.3% to 4.3% of EUPs [1]. A distinction is made between early abdominal pregnancy and advanced abdominal pregnancy diagnosed after 20 weeks' gestation. It is responsible for a high perinatal mortality rate (40%

- 95%). Maternal mortality is 5.2‰ [1] [2]. The prevalence of abdominal pregnancies in Africa varies between 1 /1134 in South Africa, 1/2583 in Dakar and 1/3750 of deliveries in Libreville [1].

In our countries, diagnosis beyond the second trimester remains difficult, with a sometimes poor maternal and fetal prognosis.

Ultrasound and clinical examination allow diagnosis in 50% of cases [3]. It has a high incidence in developing countries, due to the high prevalence of sexually transmitted infections [4]. Laparotomy, irrespective of fetal status, is the treatment of choice because of the risk of maternal complications at any stage of pregnancy. The aim of this case report is to highlight the difficulty of early diagnosis of abdominal pregnancy in our environment, despite the frequent use of ultrasound.

2. Observation

The case we are reporting here was carried out with the informed consent of the patient after approval by the hospital management and the group of research professors at the same hospital. Primigeste, 21 years old, single sex worker. She was referred from medical practice for metrorrhagia and pelvic pain after 3 months of secondary amenorrhoea.

An office ultrasound revealed an intrauterine gestational sac containing a fetus with no cardiac activity, whose craniocaudal length was consistent with a pregnancy terminated at 16SA. On clinical examination, she was hemodynamically stable with hypogastric pain and a left latero-uterine mass. On the basis of this ultrasound, cervical ripening was performed using misoprostol 400 µg for 48 h. Following the failure of induction, a 2nd ultrasound revealed an extra-uterine and left para-ovarian gestational sac containing an inactive fetus with no cardiac activity and a femoral length of 20 mm, corresponding to an arrested pregnancy at 16 SA + 1 day. The uterus was of normal size and empty, with a homogeneous echostructure and regular contours (**Figure 1**). Laparotomy revealed an abdominal pregnancy with a placenta inserted in the left broad ligament (**Figure 2** and **Figure 3**). The adnexa were macroscopically normal. The left broad ligament was resected, and the fetus and placenta were removed. Post-operative management was straightforward and she was put on contraception.

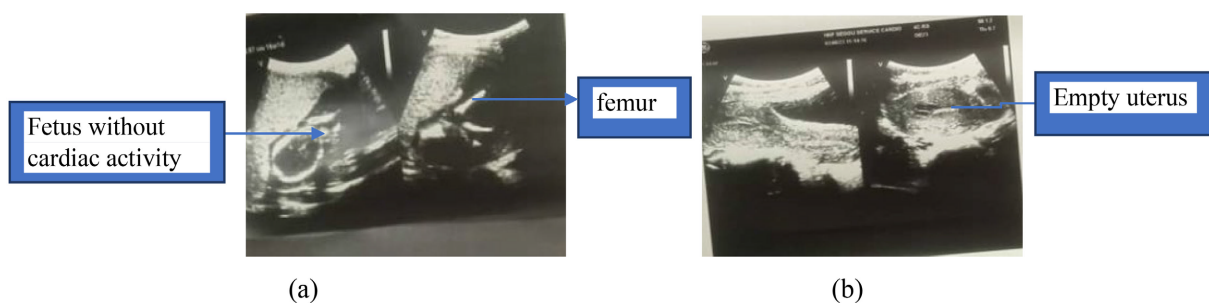


Figure 1. (a) Fetus without cardiac activity (b) Empty uterus.

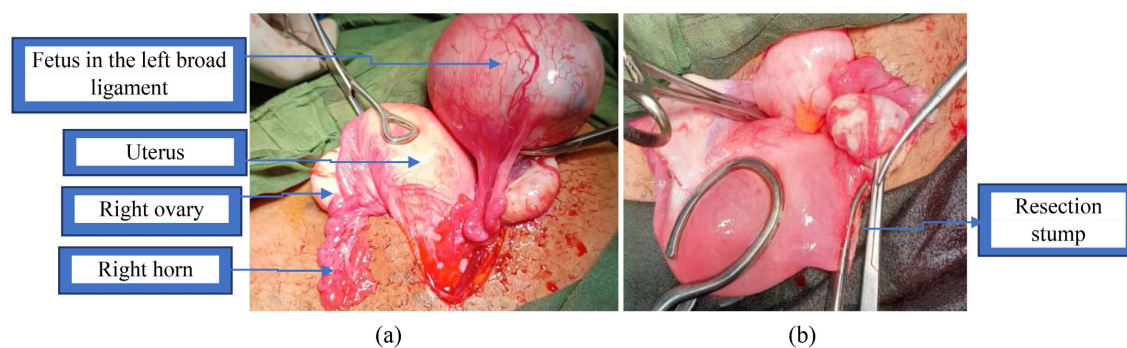


Figure 2. (a) Operative view of the anterior aspect of the uterus, adnexa and pregnancy; (b) Operative view after resection of the uterus, adnexa and pregnancy.

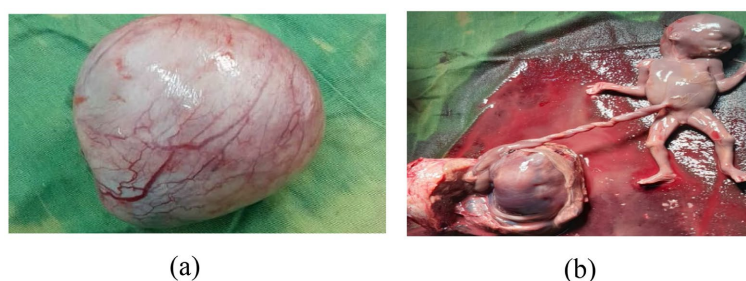


Figure 3. (a) Hull containing pregnancy (b) Dissection of pregnancy.

3. Discussion

Bayle first described abdominal pregnancy in 1678. It is an obstetric emergency because it can be life-threatening in the event of rupture. It occurs in 1 in 10,000 to 15,000 live births [2] [5] [6], with significant perinatal morbidity and mortality of 20% to 100%, and a risk of maternal death of 0% to 30% [1] [2] [7]. Abdominal pregnancy is associated with septic abortions, low socioeconomic status, poor antenatal care, in vitro fertilisation, pelvic surgery and intrauterine devices [1] [2] [5]. Our patient came from a low socioeconomic background and was a sex worker, which is a risk factor for sexually transmitted infection. According to Studdiford's criteria, abdominal pregnancies are classified as primary and secondary: primary abdominal pregnancy corresponds to direct implantation of the egg in the abdominal cavity following a delay in uptake, and must satisfy three criteria (normal fallopian tubes and ovaries, with no trace of recent lesion; absence of utero-peritoneal fistula; strictly peritoneal location of a pregnancy of less than 12 Weeks of amenorrhoea).

Secondary abdominal pregnancy, which is diagnosed later, is a graft following tubal abortion or uterine rupture [1] [2]. In our case, despite the integrity of the adnexa and the uterine wall due to the age of the pregnancy (16SA) and its implantation in the left broad ligament, we hypothesised a secondary abdominal pregnancy following a graft after tubal abortion.

4. Diagnosis

Early diagnosis of abdominal pregnancy is sometimes difficult because of its non-

specific symptoms, which is why its discovery is fortuitous intraoperatively in 50% of cases [2] [8]. Its differential diagnosis may include ruptured ovarian cysts, abortion and acute appendicitis.

Endovaginal ultrasonography is the most effective means of diagnosing ectopic pregnancy, and is best indicated in the first trimester. It can identify an extra-uterine sac, often spherical, distinct from the uterus and its adnexa [4].

Our patient was admitted with metrorrhagia associated with pelvic pain after 3 months amenorrhoea. On examination her haemodynamic status was stable, with a left latero-uterine mass on vaginal examination. The same clinical picture was described in the cases of Beya Mohamed M. L [2] and Abdi A. B [9]. In addition to pelvic pain, HF Rabarikoto *et al.* [6] have reported incoercible vomiting during pregnancy and episodes of syncope. Advanced abdominal pregnancy may have different clinical manifestations, depending on the vitality of the foetus. These may include abdominal pain synchronous with active foetal movements, sometimes digestive disorders (nausea, vomiting, constipation, subocclusion), anaemia, altered general condition, palpation of foetal parts under the maternal skin, anomalous shape of the maternal abdomen linked to abnormal foetal presentation, and a long, hard cervix fixed under the pubic symphysis [1] [2]. Despite the late diagnosis, these signs were absent in our patient due to foetal death. These signs were found in the patients of Nyada SR *et al.* [1], E Bohoussou *et al.* [8] and Ignace Bwana Kangulu *et al.* [10] because in their cases the pregnancies were at term. Ultrasound is the diagnostic test for abdominal pregnancy [5] [6]. In cases of uncertainty, magnetic resonance imaging (MRI) is used [11]. In our case, the initial misdiagnosis was due to the fact that the first ultrasound scan was performed by an unskilled operator. Following the failure of the trigger, a second ultrasound rectified the diagnosis. (Figure 1). In the cases of Rabarikoto HF [4] and Ignace Bwana Kangulu *et al.* [10] the first ultrasound scan allowed the diagnosis of an abdominal pregnancy, revealing respectively, in the 1st case, a pregnancy at 5 weeks' gestation with precise localisation; in the 2nd case a fetus in transverse presentation in the peritoneal cavity without any signs of life. As in our case, the diagnosis of abdominal pregnancy was suspected by other authors following the failure of induction like M. Gueye *et al.* [12]. This failure led to a 2nd ultrasound scan which revealed an empty uterus and a non-progressive abdominal pregnancy at 38 weeks' gestation. The same observation was made by P Guié *et al.* [13] in two cases.

5. Treatment

Most authors recommend laparotomy, regardless of foetal status, given the unpredictable and serious nature of maternal complications at any age of pregnancy [2]. Like many other authors, we have adapted this choice of treatment [1] [2] [6] [7] [10] [11] [14].

While there is a consensus on the extraction of the foetus in abdominal pregnancy, this is not the case for the extraction of the placenta. Some authors

recommend extraction of the foetus and placenta during the same operation if this is easy after inventorying the relationship of the placenta with the pelvi-abdominal organs, while other authors consider it more prudent to leave the placenta in situ after proximal ligation of the umbilical cord [2] [7]. Placental resorption is monitored by ultrasound and gonadotropic chorionic hormone. We performed a resection of the left broad ligament, removing the fetus and placenta, as in the case of F. Randrianantoanina *et al.* [14] where incomplete removal of the uterine horn allowed safe removal of the sac and placenta.

6. Prognosis

The maternal prognosis depends on the delay in diagnosis and the attitude adopted towards the placenta. While maternal mortality is between 0% and 30%, depending on the study, the fetal prognosis is marked by high perinatal mortality (40% to 95%). This is linked to defective vascularisation of the placenta (premature ageing), hypotrophy and foetal malformations [1] [2] [5] [10] [14]. The fetus in our case was macerated, the postoperative course was simple and the patient was discharged on the 3rd postoperative day. At 15 days post-op, the wound had healed and the patient was put on contraception. In the case of Gbary-Lagaud E *et al.* [7], anaemia and parietal suppuration prolonged the patient's stay in hospital for 30 days, compared with an average of 10 days found by M. Gueye *et al.* [12].

7. Conclusion

Abdominal pregnancy is a rare condition that is still encountered in under-medicalised countries. It is difficult to diagnose beyond the second trimester. Ultrasound diagnosis is essential. The fetal prognosis remains guarded in all cases, but that of the mother is improved by early management. Prevention of risk factors for GE could reduce its occurrence.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

- [1] Nyada, S.R., Mendoua, M., Ebong, C.E., Noa Ndoua, C.C., Messi, S.E. and Ebune, J.L. (2022) Late Diagnosis Abdominal Pregnancy with Live Birth: A Case Report. *Health Sciences and Disease*, **23**, 107-110.
- [2] Mohamed Mahmoud Lemhaba, B., Lemrabot, E., abdelkader Mohamed Zeine. K. Saoud, N., Mamouni, N., Errarhay, S., Bouchikhi, C., *et al.* (2021) Abdominal Pregnancy: A Case Report. *International Journal of Advanced Research*, **9**, 338-344. <https://doi.org/10.21474/ijar01/12307>
- [3] Ramachandran, K. and Kirk, P. (2004) Massive Hemorrhage in a Previously Undiagnosed Abdominal Pregnancy Presenting for Elective Cesarean Delivery. *Canadian Journal of Anesthesia* *Journal canadien d'anesthésie*, **51**, 57-61. <https://doi.org/10.1007/bf03018548>
- [4] Traoré, T., Dao, S.Z., Traoré, S., Diarra, R., Sidibé, A., Sidibé, K., *et al.* (2023)

Epidemiological, Clinical and Anatomopathological Aspects of Extra-Uterine Pregnancy in Segou (Mali). *Health Sciences and Disease*, **24**, 71-76.

<https://www.hsd-fmsb.org>

- [5] Rabarikoto, H.F., Rakotomboahangy, T.M., Randriamahavonjy, R., Rabetsimamanga, L.A.Z. and Randriambololona, D.M.A. (2019) Early Abdominal Pregnancy: A Case Report. *Malagasy Journal of Gynaecology-Obstetrics*, **1**, 6-7.
- [6] Rabarikoto, H.F., Rakotomboahangy, T.M., Razafindrabia, T.R., Razafindratsy, E. and Randriambololona, D.M.A. (2018) Abdominal Pregnancy: Diagnostic Difficulties through a Case Study. *Anesthesia and intensive Care Review Emergency Medicine and Toxicology*, **10**, 9-10.
- [7] Gbary-Lagaud, E., Loué, V., Effoh, D., Konan, J., Adjoby, R., Kouakou, F. and Boni, S. (2019) Haemoperitoneum: A Mode of Diagnosis of Advanced Abdominal Pregnancy—A Case Report. *African Journal of Anesthesia and Emergency Medicine*, **2**, 73-76.
- [8] Bohoussou, E., Guié, P., Saki, C., Okon, G., Anongba, S. and Touré-Coulibaly, K. (2013) Diagnosis and Management of Advanced Abdominal Pregnancy. *Revue Internationale des Sciences Médicales*, **15**, 30-32.
- [9] Bonahy, A.A., Sabbah, H., Abdeljelil, A.B. and Mahmoudi, M. (2016) Grossesse abdominale momifiée. *Pan African Medical Journal*, **25**, Article 230.
<https://doi.org/10.11604/pamj.2016.25.230.10857>
- [10] Kangulu, I.B., Ngoy Umba, E.K., Cibuabua, D.K., Ilunga, C.M., Ndolo, A.U., Nzaji, M.K., *et al.* (2013) Report of a Case of Very Prolonged Abdominal Pregnancy. *Pan African Medical Journal*, **16**, Article 26.
- [11] Oudghiri, N., Doumiri, M., Behat, M., Tachinante, R. and Tazi, A.S. (2013) Abdominal ectopic Pregnancy at Term. *Maroc Medical*, **35**, 24-27.
- [12] Guèye, M., Cissé, M.L., Guèye, S.M.K., Guèye, M., Diaw, H. and Moreau, J.C. (2012) Difficultés du diagnostic et de prise en charge de la grossesse abdominale: À propos de deux cas diagnostiqués à terme au Centre Hospitalier Régional de Diourbel du Sénégal. *Clinics in Mother and Child Health*, **9**, 1-3.
<https://doi.org/10.4303/cmch/c120302>
- [13] Guié, P., Iovenitti, P., Tegnan, J.A., N'guessan, E., Yao, I., Bohoussou, E., *et al.* (2009) Abdominal Pregnancy: Diagnostic and Therapeutic Problems. Our Experience Based on 4 Observations at Treichville University Hospital. *Mali Médical*, **XXIV**, 60-62.
- [14] Randrianantoanina, F., rakotosalama, D., Rainibarijaona, L., Rakotomalala, J.P., Ravelosoa, E., Andrianampanalarivo, H., *et al.* (2006) Abdominal Pregnancy: A Case Report from Madagascar. *Medecine Tropicale*, **66**, 485-487.