

# Management for abdominal pregnancy at Dhaka: A case report

Saika Shaheed<sup>1</sup>, Munima Haque<sup>2</sup>, Rebeca Haider<sup>1</sup>

<sup>1</sup>Department of Obstetrics and Gynecology, Dhaka Central International Medical College and Hospital, Dhaka, Bangladesh, <sup>2</sup>Research Fellow, Relevant Science and Technology Society, Bangladesh

**Correspondence to:** Munima Haque, E-mail: munima.haque@gmail.com

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## ABSTRACT

Pregnancy in abdominal cavity is an unusual type of ectopic pregnancy having excessive illness as well as death for the mother and the unborn baby. Identification and management may present several complications, particularly in low-resource centers. A higher level of doubt is crucial in making a timely diagnosis in these cases. A 25-year-old third gravida patient was shifted to a tertiary care center in the city on the advice of failed induction. Her previous attempt of abortion procedure failed. It was observed from her ultrasonography that her right lower abdominal cavity contained single deformed fetus with no cardiac activity. After successful laparotomy, the mass was removed from in between uterus and urinary bladder. This situation shows that several pregnancies of abdomen could be supervised properly. A case is presented here where a pregnancy in abdomen was productively taken care of by operational laparotomy. The patient had a healthy recovery. This occurrence shows that operative laparotomy is a secure substitute for the supervision of appropriately designated patients in midtrimester pregnancy in abdomen.


**KEY WORDS:** Laparotomy; Pregnancy of Abdomen; Scar Pregnancy

## INTRODUCTION

Abdominal pregnancy is an embedding of embryo inside a peritoneal cavity, restricted from ovarian, intraligamentary, or tubal embedding. This is comparatively uncommon disorder, having an occurrence around 1 per 10,000 deliveries, which is 1.4% of all ectopic pregnancies.<sup>[1]</sup> The locations of embedding comprise Douglas pouch, liver, large pelvic vessels, bowel, spleen, uterine serosa, diaphragm, pelvic side wall, etc.<sup>[2-7]</sup> Majority of pregnancy from abdomen are resultant from reimplantation of an abortion from tube. Consequently, a pregnancy of abdomen is frequently challenging to differentiate of a pregnancy from tube. The

roominess of a peritoneal cavity occasionally permits a pregnancy in abdomen to develop through or past the second trimester. As acute inside bleeding inside abdomen due to split of placenta or tear of maternal blood vessels could result in progressive pregnancies in abdomen,<sup>[7]</sup> prompt surgery is usually endorsed when pregnancy in abdomen can be verified.<sup>[8]</sup> A case of expectantly supervised pregnancy in abdomen is detailed in this study which was detected early in the pregnancy.

Extrauterine pregnancy of abdomen is an extremely unusual sort of ectopic pregnancy where imbedding happens inside a peritoneal cavity, which is outside an ovary and fallopian tube. 10 of 100,000 pregnancies are projected to befall for extrauterine pregnancy of abdomen in the USA.<sup>[1]</sup> The detection of these illnesses is often overlooked in the course of pregnancy, regardless of the regular use of ultrasonography of abdomen. Still, death frequency of mothers is assessed at around 5 of 1000, that is, about 7-fold greater compared to the predicted percentage for ectopic pregnancy and approximately 90-fold mothers death rate related to standard

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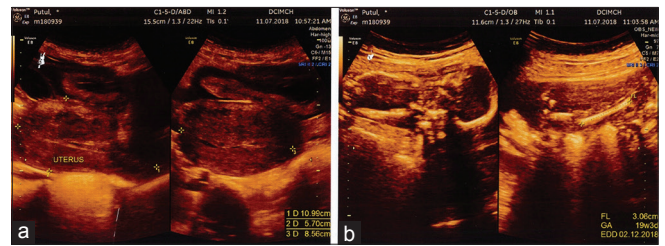
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birth in the USA.<sup>[1]</sup> The endurance of the infant is furthermore influenced having a perinatal death percentage from 40% to 95%.<sup>[9]</sup> Pregnancy of abdomen is a uncommon sort of ectopic pregnancy having higher death percentage of mothers from 2% to 30%.<sup>[10]</sup> Mortality chance is 7.7 times more for pregnancy in tube and 90 times more for pregnancy inside uterus.<sup>[11,12]</sup> In addition, it is linked to higher morbidity<sup>[9,13]</sup> due to infection, bleeding, anemia, toxemia, pulmonary embolism, disseminated intravascular coagulation (DIC), fistula formation, etc. Ultrasonography results show that pregnancy in abdomen in the first trimester or initial second trimester if followed properly, might decrease the detection fault.<sup>[12]</sup>

Pregnancies in abdomen are majorly secondary, causing from the reattachment of an abortion from tube or the increase of imbedding space across a broken tube.<sup>[14]</sup> The initial condition of Studdiford<sup>[15]</sup> aimed for the detection of primary pregnancy of abdomen demands both ovaries and tubes to be regular and not having any indication of a recent or remote injury. In this case, it was a secondary abdominal pregnancy as the fetus was formed and implanted inside the uterus but somehow managed to come out through the scar pregnancy area outside and grew there.

A pregnancy in abdomen may be doctored properly utilizing laparoscopy operation as long as it is detected in an initial gestational stage, provided the imbedding location is not a vascular region. The group of data and its proper assessment regarding the results of such circumstances would be fruitful in recognizing the ideal approach of laparoscopic treatment.<sup>[16]</sup> Laparoscopy is more effective, harmless, and inexpensive and has a quicker revival compared to laparotomy intended for the cure for ectopic pregnancy.<sup>[17]</sup> Nonetheless, a pregnancy in abdomen still may be deadly when doctored by laparotomy because heavy, occasionally unmanageable bleeding can happen from the imbedding site.<sup>[1]</sup> There are multiple studies relating to the success of laparotomy in detection and cure of abdominal pregnancy.<sup>[18-20]</sup> In this case, laparotomy was performed as the fetus was already in the second trimester. For early pregnancy, the first trimester (>13 weeks gestation), laparoscopy is the choice. This is another report for a flourishing laparotomy procedure of the second trimester abdominal pregnancy.

The diagnosis at an advanced phase necessitates experience and a higher level of skepticism by the doctor. Death during and immediately after childbirth for pregnancy of abdomen is elevated. For the supervision of abdominal pregnancy, factors, for example, difficulty of mother, fetal inherited deformity, fetal feasibility, pregnancy duration, and the accessibility of newborn babies' facilities must be studied. For dead fetus, surgery is typically specified due to the danger of contamination and DIC. Several medical experts have endorsed a duration of surveillance from 3 to 8 weeks' time for allowing waste of the vessels of placenta.<sup>[21]</sup>



**Figure 1:** (a and b) Ultrasonography pictures at 19+ weeks pregnant depicting a single fetus conforming to a particular time in dimension, amniotic fluid, and normal fetal morphology for abdominal pregnancy

There are differences in opinion regarding better supervision plan for a live fetus. Several researchers recommend instantaneous laparotomy, irrespective of pregnancy timing, or fetal state.<sup>[22]</sup> The cause is mostly grounded on the volatility of placental parting and subsequent heavy bleeding.<sup>[11]</sup> Some clinicians might approve a modified method. If the patient is <24 weeks pregnant, instant operation is directed due to the elevated danger of difficulties with mother and the insignificant diagnosis for the fetus if it endures. Nevertheless, there is a question regarding the suitability of a traditional procedure when the patient shows up after she is over 24 week's pregnancy. This procedure necessitates careful investigation when the advantages to the fetus are evaluated alongside the probable perils to the fetus mom, for example, the rough beginning of severe bleeding. It is important for the patient to get admission to a clinical institution, where there is proper service available for anesthesia, blood service, and surgery experts. In this study, if the appropriate detection could have started before fetal death, the fetus might have been saved and proceeded to full-term live birth.

The supervision of the placenta in case of pregnancy of the abdominal is nevertheless in doubt. Partial elimination of the placenta can effect in enormous unrestrained hemorrhage and distress if the full blood amount cannot be stopped. Full elimination of the placenta must be performed merely when the blood reserve could be recognized, also vigilant ligation achievable.<sup>[14]</sup> In case, total exclusion is not feasible; then, the placenta is placed in original place tying up the cord near to the placenta. It is predicted that the placenta could stay operative at around 15 days starting after the operation, and complete relapse of placental performance is typically done by 4 months.<sup>[23]</sup> Abdominal pregnancy is an uncommon thing with 50%–90% of diagnostic error. Diagnostic overlooking is exceptionally reasonable. Ultrasonogram performed by obstetrician can provide initial detection due to improved medical association.

Precise human chorionic gonadotropin (HCG) level measure and the extensive utilization of transvaginal ultrasonography have assisted in a new precise detection of the first ectopic pregnancy. Mavrelou *et al.*<sup>[24]</sup> showed that the success percentage of pregnant supervision for pregnancies in

tubes midst these fulfilling the condition increased to 71% (104 cases of 146). These measures are (1) no indication of meaningful hemoperitoneum, (2) medical strength having minimum or no ache in abdomen, (3) mass from ectopic pregnancy having an average diameter <30 mm excluding cardiac motion of embryo, and (4) serum  $\beta$ -HCG serum amount <1500 IU/L.<sup>[25]</sup> Mass from ectopic pregnancy usually degenerates and vanishes once serum HCG serum converts to negative value. In conclusion, management for an abdominal pregnancy of secondary to tubal abortion is observed. This occurrence shows that several abdominal pregnancies could be accomplished expectantly. During expectant management, an abdominal pregnancy mass might stay for an extended duration causing sufficient indications requiring surgical amputation.<sup>[24]</sup> Abdominal pregnancy is related to maternal death around 8-fold higher than tubal ectopic pregnancy.<sup>[1]</sup> Contemplating the upsurge in the rate of ectopic pregnancy recently and as 1% of ectopic pregnancies are abdominal,<sup>[9,26]</sup> larger alertness of these scientific highlights as well as supervision of pregnancy in abdomen is commanded. Laparoscopy has progressively substituted laparotomy as the desirable surgical method in supervising ectopic pregnancy,<sup>[17]</sup> though its usefulness in the detection and cure of pregnancy in abdomen is not adequately performed. A case study of primary abdominal pregnancy is presented here detected at 6-week gestation which was doctored expertly by laparotomy surgery.<sup>[16]</sup>

There are not many documents reported for abdominal pregnancy in Bangladesh. As it has been an important issue to understand and the urgency to detect abdominal pregnancy at an early stage and also its proper diagnosis, cases must be reported to overcome the limitations of early successful detection and treatment. The objective of this study was to diagnose an abdominal pregnancy case and to provide proper treatment as well as prevention of subsequent complications.

## CASE REPORT

This is a case study which was carried out at a modern tertiary care hospital, Dhaka Central International Medical College and Hospital, Dhaka, after taking approval of the institutional ethical committee. The patient was selected for this study after reporting abdominal pain and went through proper treatment and recovery. Routine examinations were performed as well as regular monitoring was done by the surgeon on the patient.

A 25-year-old Bangladeshi married woman, gravida 3, para 1, hailing from Jessore, had 18+ weeks of non-viable pregnancy with a history of one cesarean section. She previously had no antenatal checkup. She has no history of chronic illness. Her last menstrual period was on February 20, 2018. She has a previous history of one abortion. At first, she was admitted into a local hospital in Jessore for termination of pregnancy,

due to miscarriage. Her ultrasonography was misdiagnosed stating her uterus contained a single fetus without any fetal cardiac activity. Her hemoglobin was 11.7 g/dL. She was treated by tablet misoprostol for abdominal contraction following termination of pregnancy. However, after repeated 5 days trial, there was no contraction and no expulsion of the product of conception. For this reason, the hospital also gave her intracervical catheter, but no labor pain initiated. After a failure of the successful procedure, she was referred to Dhaka for better management. She was admitted into a private hospital, Dhaka Central International Medical College and Hospital, at Dhaka. After admission, she was advised for all coagulation profile including EBC, prothrombin time, activated partial thromboplastin time (APTT), D-dimer, and fibrinogen degradation products (FDP). Her D-dimer level was >50  $\mu$ g/mL, fibrinogen level 30 mg/dL, FDP 28.60 pg/ml, F-T4 was 2.24 ng/dL, thyroid-stimulating hormone value was 0.902  $\mu$ IU/mL, and prothrombin time 13.0 s. Her APTT value was 58.0 s. She also did ultrasonography of pregnancy profile as shown in [Figure 1 a and b]. However, it shows right lower abdominal cavity containing single deformed fetus with no cardiac pulsation. Furthermore, the uterine cavity was empty. Ultrasonography concluded that this is a non-viable abdominal pregnancy of about 19+ weeks. The decision was taken for emergency laparotomy with two to three units of blood. After Pfannenstiel incision, the dead fetus was found to lie in the middle of the bladder and uterus anterior wall. The sac was attached to the previous scar, which is known as scar pregnancy. After removing the dead fetus with the placenta, the uterus was secured by giving stitch on previous scar area. Bleeding was more than average. Therefore, two units of fresh blood were given. On the 1<sup>st</sup> operative day, the patient was clinically improved, no excessive paravaginal bleeding. Her physician gave injection methotrexate, and  $\beta$ -HCG was performed to see any abnormalities. Her  $\beta$ -HCG was within the normal level. 3 days after operation, following dressing, the patient was released.

## DISCUSSION

This is a case study of a young pregnant Bangladeshi female in her midtrimester misdiagnosed to have miscarriage having a fetus of no cardiac activity. After repeated failure of abortion, it was diagnosed correctly by an obstetrics surgeon (first author) at a modern tertiary care hospital that it was an abdominal pregnancy and after proper treatment, operation and follow-up were performed. The dead fetus was removed by laparotomy, previous scar area was stitched, and the patient had a successful recovery.

There are multiples cases reported around the world regarding abdominal pregnancy having both live and dead fetus. A case was reported in a female of 30 years of age having severe abdomen and hemoperitoneum due to pregnancy in spleen. During surgery, 1.5 L of blood clot and blood was located

inside the peritoneal opening while the fetus/placenta was seen to be connected by the spleen. Additional observation of the pelvic cavity showed no irregularity, signs of pregnancy in tube also were not detected. The fetus was isolated from spleen resulting in reasonable blood loss.<sup>[27]</sup> Another case was shown of an advanced stage pregnant patient having fetus in abdomen maintaining a feasible full-term fetus, who was received in Faridpur Medical College and Hospital. The patient presented late due to poverty, illiteracy, and deprivation of antenatal care. Performing laparotomy, the diagnosis was verified, followed by the delivery of a healthy male baby.<sup>[28]</sup> Another case was reported of a 37-week abdominal pregnancy having fetal death, a housewife of 22 years of age in deprived socioeconomic condition. The patient was admitted for unusual abdominal uneasiness starting of pregnancy at 20 weeks; however, the actual findings were overlooked each time. Last, she was presented when pregnant at 37 weeks with death of fetus inside uterus. With a higher level of doubt, an obstetrician performed the ultrasonography which was used for detection and laparotomy was utilized for confirmation. Inside the abdominal cavity, a deceased mashed fetus was discovered. Breech extraction was utilized to bring out the dead fetus. Placenta was isolated promptly; in addition, the injured portion of the uterus was mended. After appropriate hemostasis and inspecting rest of the organs in abdomen, the abdomen was shut by stratum while retaining a channel in appropriate position. The patient had five units of blood transferred into her circulatory system around the time of operation. The patient had a successful recovery after operation.<sup>[29]</sup> Most cases the patients present themselves late due to poverty, illiteracy, and deprivation of antenatal care. Usually, the patient gets admitted for abnormal abdominal uneasiness. In some cases due to misdiagnosis, the actual findings had been missed each time which has led to intrauterine fetal death. Obstetrician performs the ultrasonography which was used for diagnosis and was confirmed by laparotomy. Patients receive a blood transfusion through the perioperative stage. When in some cases where proper diagnosis is made earlier, there are success stories of live babies delivered.

The strength of the case report is that it is a study of the indications, detection, and cure of a specific patient undergoing abdominal pregnancy. Furthermore, it describes an unusual occurrence. This can provide an overview of how an abdominal pregnancy situation can be taken care of. The limitations of this report are it only can give one single specific occurrence of abdominal pregnancy situation and from where it is difficult to follow with if another situation has a different case history. This diagnosis, treatment, and follow-up are a case-by-case basis.

Abdominal pregnancy is a severe and possibly deadly illness. There is a problem in distinguishing between abdominal pregnancy and intrauterine pregnancy as abdominal pregnancy instigates insufficient signs. As the detection of

abdominal pregnancy is averted before operation frequently, recurring abdominal pain during pregnancy must be one of the distinctive detections of pregnancy having abdominal discomfort. The foundation of effective supervision appears to be prompt surgical expertise; blood supplies complete availability, identification during surgery, careful post-operative maintenance, and detailed valuation of the newborn.<sup>[28]</sup>

## CONCLUSION

This occurrence shows that operative laparotomy is a secure substitute for the supervision of appropriately designated patients in midtrimester pregnancy in abdomen.

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