

# Morbidly Adherent Placenta in Mid Trimester Abortion - A Case Report

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## Abstract:

*Morbidly adherent placenta (MAP) occurs when there is abnormally firm attachment of placental villi to the uterine wall with the absence of the normal intervening decidua basalis and nitabuch's layer. There are several risk factors of this condition including previous uterine surgery like myomectomy, dilatation and curettage operation, placenta praevia following previous caesarean section, advanced maternal age, multiparity and tobacco use. A diagnosis of MAP can be confirmed with tissue histology; however, medical imaging can be effective diagnostic tool. USG can detect the presence of accreta (80% sensitivity) and absence of accreta (95% specificity). This condition is presented here as a 20 weeks pregnancy with missed abortion with morbid adherent placenta (MAP).*

**Key words:** Morbidly adherent, placenta, Midtrimester, abortion

## Introduction:

Morbid adherent Placenta is defined as the abnormal adherence either in whole or in part of the placenta to the underlying uterine wall. Normally, the placenta adhere to decidua basalis layer, allowing for a smooth separation of the placenta from the uterus after delivery. In patients with abnormal placentation, the placenta directly anchored to the myometrium partially or completely without any intervening decidua. The probable cause is due to absence of decidua basalis and poor development of fibrinoid layer. Overall incidence of MAP is 1 in 550 deliveries.<sup>1</sup> It is a significant cause of maternal morbidity and mortality. MAP is potentially life threatening haemorrhagic condition responsible for 7-10% maternal mortality.<sup>2</sup>

MAP is classified according to the degree of adherence and by the amount of placental involvement into three types as –

- A. Placenta accreta- Chorionic villi adherent to superficial myometrium..
- B. Placenta increta – chorionic villi involving myometrium.
- C. Placenta percreta - chorionic villi penetrating full thickness myometrium and involving serosa.

Placenta accreta is the most common form accounting for approximately 75-78%, increta accounts for about 17%, while percreta comprise about 5-7%.<sup>3</sup>

By the amount of placental involvement, there are 3 types of placenta accrete;-

- A. Focal adherence – when part of the cotyledon is involved.
- B. Partial adherence- when more than one cotyledon is involved.
- C. Total adherence- when whole placenta is involved.

Incidence of morbidly adherent placenta is increasing secondarily to the rise of caesarean section. In 1970 it was 1/70000, from 1985-1994 is increased to 1/2510<sup>4</sup>, and from 1992-2002 reported incidence is 1/533<sup>5</sup>.

The risk factors of MAP include previous uterine surgery like myomectomy, dilatation and curettage and placenta praevia following previous caesarean section, advanced maternal age, multiparity and tobacco use<sup>6</sup>.

But more ominously, placenta praevia has been associated with a high rate of placenta accreta<sup>5</sup>.

The risk of placenta accreta with placenta praevia in an unscarred uterus is about 3%<sup>1</sup>.

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The risk rises sharply with increasing number of caesarean delivery. Placenta praevia with one prior caesarean delivery, the risk of being accreta is about 11%, whereas with two it is 40% and it is 67% with four or more caesarean section.<sup>1</sup>

During pregnancy MAP may be either asymptomatic or may present with antepartum haemorrhage, abdominal pain and acute abdomen, while intrapartum it may present as retained placenta, PPH or uterine rupture. The diagnosis is made only during attempted manual removal when the plane of cleavage between the placenta and the uterine wall cannot be made out.

USG imaging, colour Doppler and MRI have all been valuable in the diagnosis of MAP. USG findings suggestive of MAP are: (1) loss of normal hypoechoic retroplacental myometrial zone<sup>1</sup>.

Worshak et al. reported that in case of inconclusive ultrasonography MRI accurately predict placenta accreta with 88% sensitivity and 100% specificity<sup>7</sup>

Management should involve multidisciplinary team of uro-gynaecologist, a urologist and (or a gynecologist). Currently the management option for MAP include conservative and extirpative approaches<sup>8</sup>.

The conservative strategy entails leaving the placenta in situ which may be followed by medical management with Methotrexate, uterine artery embolization, internal iliac artery ligation /embolization, dilatation and curettage or hysteroscopic loop resection.<sup>9,10</sup>

However, risk of sepsis and delayed hemorrhage is also incurred.

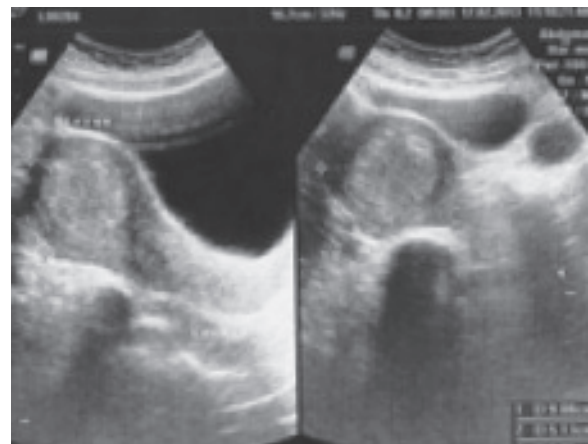
### Case Report:

A 26 years old multiparous lady from middle class family was admitted in Shahabuddin Medical College Hospital on 23<sup>rd</sup> October 2012 with the complaint of 2<sup>nd</sup>gravida with 20 weeks pregnancy with missed abortion. Her 1<sup>st</sup> pregnancy was also ended with spontaneous abortion at 10<sup>th</sup>wks. Dilatation, evacuation and curettage was done in that case 2 years ago.

This was her planned pregnancy and she was on regular antenatal check up outside of this hospital. Her pregnancy was uneventful up-to 20 weeks. At her 20wks of pregnancy she did an USG of pregnancy

profile and diagnosed as missed abortion. Then she got admitted in the hospital for termination of pregnancy.

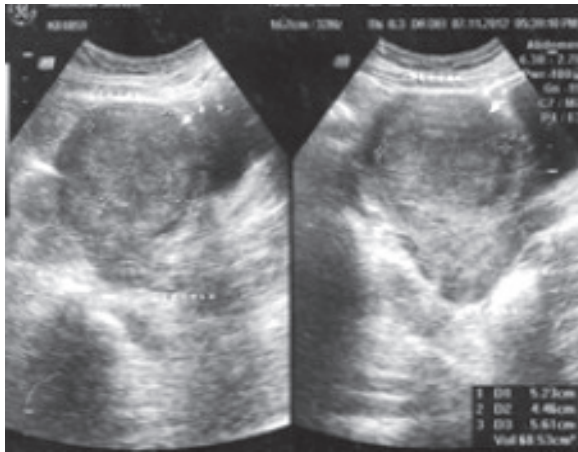
On examination patient was co-operative, not anaemic, normotensive. Symphysio fundal height was 18 weeks pregnancy size. No vaginal discharge. External os of cervix was close. She was not diabetic and her thyroid function test was normal (euthyroid). Medical induction with Tab Misoprostol and then with Inj. Oxytocin was done. On 24<sup>th</sup> October a dead male baby was delivered but placenta retained within the uterus. Then manual removal of placenta under general anesthesia was attempted but the procedure failed. As there was no cleavage between the placenta and the uterus. Bleeding was scanty. The procedure was postponed and left the placenta in the uterine cavity and patient was treated with antibiotics (tab Ciprofloxacin, Metronidazole) and oral Misoprostol. After 5 days an USG of lower abdomen was done which showed large retained product (7.4×4.8×5.2volume 98.5cc) of conception near the fundus of the uterus (Fig.-1). Margin of the placenta with myometrium was not well defined. Her



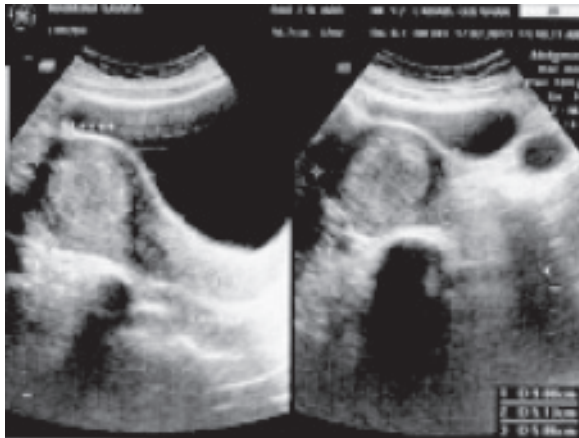
**Fig.-1:** Full retention of placenta after expulsion of the baby.

temperature was normal (98<sup>o</sup>F) and per vaginal discharge continues which was average. Serum beta hCG was done and it was 409 mIU/ml. CBC, coagulation profile, liver function test and renal function tests were done and all were normal. Then she was given Inj. Methotrexate 50mg I/M stat. Repeat USG was done after one week, which showed large retained product of conception (5.2×4.4×5.6

cm volume was 68.5cc) (Fig.-2), Margin of the placenta was not sharply demarcated. Beta hCG was 300 mlu/ml. As there was no significant reduction of beta hCG 50mgMTx/M was repeated. Patient was followed up with serial USG of lower abdomen and Serum beta hCG at 15 days interval. After reduction of beta hCG it was repeated monthly till complete subsidence. During follow up period she did not develop rise of temperature but occasional vaginal discharge continues which was not foul smelling. On 28/1/2013 beta hCG was 4.8mlU/ml and USG showed adherent retained placenta (3.7×3.2×3.8 and volume 24 cc) (Fig.-3). On 6<sup>th</sup> February she felt passage of a whitish mass per vaginally and then per vaginal discharge stopped. On 18/02/13 she did an USG of pelvic organ, which showed normal study (uterine cavity was empty). She resumed her regular menstrual cycle from 17/3/2013.



**Fig.-2:** Seven days after giving 1<sup>st</sup> dose of injection methotrexate.



**Fig.-3:** Three months after expulsion of the baby.

### Discussion:

Morbidly adherent placenta is a life threatening complication of pregnancy. The MAP remains the greatest challenge in modern obstetrics<sup>11</sup>. Maternal risk is the greatest on attempt to separate the placenta, resulting torrential haemorrhage, DIC, massive blood transfusion, hysterectomy, bladder and uterine trauma, ARDS, acute tubular necrosis, need to intensive care and even death.<sup>5</sup> The epidemic of placental invasion is escalating due to rising rate of caesarean section. It has risen to 10 fold in past 50 years.<sup>12</sup> Clark et. Al observed an increased incidence of placenta previa after caesarean section from 26% in women with a normal uterus to 65% after one and further increased after 4 or more caesarean section<sup>13</sup>. In the presence of risk factors like previous caesarean section, history of myomectomy or D and C operation, grand multiparity obstetrician must have a high index of suspicion for placenta accreta. The imaging modalities of USG and MRI plays an important role especially in patients who have the above mentioned risk factors<sup>14</sup>. The most influential variable on maternal outcome is not attempting to remove the placenta. A recent review also advised against attempts at placental removal before hysterectomy<sup>15</sup>. Hysterectomy has traditionally been advised in the management of placenta accrete but there has been a recent movement towards conservative management and preservation of fertility. Strategies include leaving the placenta after caesarean delivery with surgical uterine devascularization, embolization of uterine vessels, uterine compression suture and/over sewing of placental vascular bed<sup>16</sup>. A conservative approach was first described by Arulkumarran and colleagues in 1986 by using systemic MTx<sup>17</sup>. Severe intrauterine infection and life threatening haemorrhage can occur requiring emergency hysterectomy, thus patients should be carefully monitored and extensively counseled regarding risks.<sup>18</sup> MTx has an important role in conservative management of placenta percreta with bladder invasion and it has been used in any patients.<sup>19</sup> MTx a folate antagonist, and primarily against rapidly dividing cells and therefore is effective against proliferating trophoblast. However, more recently others have argued that, after delivery of the foetus, the placenta is no longer dividing and therefore MTx is of no value. MTx has been used in varying doses and routes; however there are no randomized trials and no standard protocol regarding its dose.<sup>20</sup> In spite of these controversies we used methotrexate two doses of 50 mg and found effective to resolute placenta with a reasonable period without having any adverse effect to mother.

**Conclusion:**

Antenatal diagnosis of morbidly adherent placenta is the key to save the women's life. Adherent placenta should be suspected even in 1<sup>st</sup> trimester in women with known risk factors. Multidisciplinary approach and non-separation of placenta is the best option to reduce maternal mortality and morbidity. Further studies are needed to identify optimal management strategies for this increasing morbid condition.

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