Morbidly adherent placenta

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DEFINITION

• Abnormal attachment of placenta to the myometrium.
Adherent placenta occurs

when there is a **defect in the decidua basalis**, Resulting

in an **abnormal invasion** of the placenta directly into the substance of the uterus.
Types

1) Simple Adherent Placenta.

2) Morbidly Adherent Placenta:
   i) Placenta Accreta
   ii) Placenta Increta
   iii) Placenta Percreta
INCIDENCE

- It varies widely all over the world.
- Increased dramatically over the last 3 decades (Because of ...Increase in LSCS rate).

- **A.C.O.G.** → 1 Per 2500 deliveries.
  - Accreta: 75 - 78 %
  - Increta: 15 – 18 %
  - Percreta: 5 - 7 %
Associated Condition:

- Placenta Previa
- Previous Surgeries such as...
  - Cesarean Section
  - Myomectomy
  - Synecolysis
- D & C
- M.R.P.
- Cornual Resection
- Uterine Malformation
- Septic Endometritis
Risk Factors:

- High Parity
- Advanced Maternal Age
- Down Syndrome
- High level of Maternal Serum AFP.
- High level of Maternal free Beta hcg.
ETIOLOGY:

Defective decidual formation:

- Partial / total absence of decidua basalis

- Imperfect development of fibrinoid layer (Nitabuch layer)

- Placental villi are attached to the myometrium
**Significance:**

- Increased Maternal *Morbidity* (2 – 7 %)
- Increased Maternal *Mortality* (7 – 10 %)

From,

- Severe Hemorrhage
- Infection
- Inversion of Uterus
DIAGNOSIS

- Earliest diagnosis of Adherent Placenta is must to avoid any catastrophic emergency in future.
- Antenatal diagnosis is the single most important factor in improving the outcome in MAP.
METHODS

- Clinical suspicion
- Ultrasound
- Color Doppler
- MRI
- Histopathology
USG

- First-line investigation for suspected placental invasion of the myometrium.

- The most useful modalities for evaluating placental position and implantation are transabdominal and transvaginal ultrasonography
USG CRITERIA

1st Trimester:

G. Sac located in the lower uterine segment (rather than the fundus), next to or lower than the Prev. CS scar.

2nd & 3rd Trimester:

- Presence of irregular lacunae within the placenta
- Loss of retro placental clear space
- Loss or disruption of the white line – Bladder line
Moth – eaten
OR
Swiss Cheese Appearance

Obliteration of clear space between placenta and uterine wall
Reliability:

- Sensitivity - 93%
- Specificity - 79%

The use of power Doppler, color Doppler, or three-dimensional imaging does not significantly improve the diagnostic sensitivity compared with that achieved by grayscale Ultrasonography alone.

Colour Doppler

- Diffuse or focal intraparenchymal lacunar flow.
- Vascular lakes with turbulent flow.
- Hypervascularity of serosa-bladder interface.
- Prominent subplacental venous complex.
M.R.I.

- No more sensitive than USG, But used as an adjunct to USG, when there is strong clinical suspicion of accreta.
- MRI achieves better images than Ultrasonography in
  - Posteriorly sited MAP and
  - With prior myomectomy,

  (Because the ultrasound beam is impeded by the fetal head in the former and by the scar tissue in the latter)
M.R.I. Criteria

- Uterine bulging into the bladder
- Heterogeneous signal intensity within the placenta
- Presence of intra placental bands on the T2W imaging
- Abnormal placental vascularity
- Focal interruption of the myometrium
Histology

- Post Partum specimen shows:

Placental villi anchored directly on, or invading into or through, the myometrium, without an intervening decidual plate.
Treatment:

A multidisciplinary team approach is relevant in managing these patients in order to reduce morbidity and mortality associated with MAP.
Management

- **Timing of delivery**
  - Individualised decision
  - Recommended at 34 weeks after fetal lung maturity
  - In a tertiary care centre

- **Cesarean section**
  - Consent for peripartum hysterectomy
  - Prepared for massive haemorrhage and blood transfusion
Particular consideration should be given to anticipation and management of massive hemorrhage including:
- availability of packed cells,
- platelets,
- fresh frozen plasma,
- cryoprecipitate, and
- activated factor VII.
At present, placenta accrete can be managed in three ways:

(1) Carry out a hysterectomy;

(2) Leave the placenta in situ; and

(3) Resect the invaded tissues with the entire placenta restoring uterine anatomy.

Each one has weaknesses and strengths, dependent on the condition itself and the specific preferences taken by the surgeon and the team.
Women who have had a previous CS who also have either placenta previa or an anterior placenta underlying the old CS scar at 32 weeks of gestation are at increased risk of placenta accreta and should be managed as if they have placenta accreta, with appropriate preparations for surgery made. (RCOG 2011)

Elective delivery by caesarean section at 34–35 weeks of gestation for suspected placenta accreta (ACOG 2012).
Conservative

- **In case of**
  - (focal defect / moderate blood loss / fertility to be preserved)

  - Localized Resection with uterine repair
  - Blunt dissection followed by *curetting* the uterine cavity

Uterus fails to contract (Multipara):

  - Hysterectomy
Non Surgical

- Leave the Placenta in situ to resorb with methotrexate therapy
- Ligation of the Ut. And Int. iliac artery
- Fluoroscopic bilateral UAE
- Argon beam coagulation for haemostasis
- Insertion of occluding Balloons in the Int. iliac art. (Bilat)
Surgical

- Cesarean Hysterectomy.
- Hysterectomy and partial / total resection of bladder
- Subtotal Hysterectomy with removal of large part of placenta and Prophylactic occlusive Balloon catheter in int. iliac art.
An Elective controlled condition is preferred rather than an emergency condition without adequate preparations.

A midline incision will facilitate better exposure, especially if placenta Percreta is suspected.

Leaving the placenta undisturbed until completion of the hysterectomy would prevent unnecessary hemorrhage.

In cases where MAP is associated with placenta previa, total hysterectomy is preferred to a subtotal hysterectomy.
Uterine Incision:

It is best to avoid cutting through a MAP because of the possibility of massive haemorrhage.
Various *modifications* of the uterine incision to avoid the placenta have been reported...

- Classical incision,
- High transverse incision,
- Fundal incision,
- Fundal transverse incision
Excision of placental site

- It is possible to "excise the placental site".
- If the area of placental attachment is focal and the majority of the placenta has been removed, then a "wedge resection" of the area can be performed.
Balloon Catheterization

- Pre-operative placement of arterial catheters in internal iliac artery
- After delivery balloons are inflated to achieve temporary homeostasis
- Selective arterial embolization (SAE) if necessary...
- Bil. Int. iliac artery ligation is performed prior to peripartum hysterectomy where Interventional Radiology is not available.
Placement of occlusion balloon catheters into both internal iliac arteries.
Methotrexate

- A folate antagonist, acts primarily against rapidly dividing cells and therefore is effective against proliferating trophoblasts.
- First described by Arulkumaran et al in 1986. They reported administration 50 mg of methotrexate as an intravenous infusion on alternate days and the placental mass was expelled on 11th postnatal day.
Methotrexate has been used in varying doses and routes, however, there are no randomized trials and no standard protocol regarding its dosage.

The outcome when the placenta is left in place after methotrexate administration varies widely; it ranges from expulsion at 7 days to progressive resorption in roughly 6 months.

Mtx – 50 mg IM + Folic Acid 6mg IM on alternate day till β HCG comes to zero.
Other Modalities

- Tamponade of the placental implantation site with inflated Intra Uterine balloon catheter bags.
- Lower Segment Compression Sutures
- Pelvic pressure sponge packing.

Figure 3. Bleeding because of placenta previa or accreta.
Follow up...

1. Ultrasound exams & Vascularity
2. hCG titers weekly till become Zero.
3. Daily Temps, Other S&S of infection
4. Bleeding
5. Coagulation profile

Antibiotic Maximum for 10 days.
Bladder Involvement

➢ First, Involve UROLOGIST.

➢ Preoperative Ureteric stenting aids in identifying the ureters, which will help reduce ureteric injuries.
To Conclude...

- Caesarean hysterectomy was the cornerstone in the management in the past.
- Antenatal diagnosis permits effective and safe conservative approaches today.
- The use of methotrexate, monitoring with serum hCG and follow up with USG is recommended.
THANKYOU