MANAGEMENT OF PLACENTAL ADHESIVE DISORDERS

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PLACENTA ACCRETA

• First described in the 20\textsuperscript{th} century
  – 1930-50 \rightarrow 1/30000
  – 1950-60 \rightarrow 1/19000
  – 1980 \rightarrow 1/7000
  – Today \rightarrow 1/500-2500 births

• Mortality !
• Emergency peripartum hysterectomy !
Normal (Decidua)

Increta (17%)

Stratum basalis of endometrium

Myometrium

Accreta (75-78%)

Percreta (5%)
RISK FACTORS

• Placenta previa
  – Previous C/S
  – Myomectomy
  – Multiple pregnancy
  – Grandmultiparity

• Previous uterine surgery (myomectomy, C/S)

• Asherman syndrome

• Submucous myoma

• Advanced maternal age

• Female fetus
<table>
<thead>
<tr>
<th>C/S</th>
<th>Placenta previa</th>
<th>Normal Placenta</th>
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<tbody>
<tr>
<td>Primary</td>
<td>3.3</td>
<td>0.03</td>
</tr>
<tr>
<td>2</td>
<td>11</td>
<td>0.2</td>
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<tr>
<td>3</td>
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<td>4</td>
<td>61</td>
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<tr>
<td>5</td>
<td>67</td>
<td>0.8</td>
</tr>
<tr>
<td>≥ 6</td>
<td>67</td>
<td>4.7</td>
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Uterine sutures at prior caesarean section and placenta accreta in subsequent pregnancy: a case–control study


- Interrupted sutures better than continuous

Sumigama S, et al. BJOG 2014; DOI: 10.1111/1471-0528.12717
Maternal/fetal risks $\uparrow$

$>36$ w, invasion degree

- Scaring process after surgery
- Abnormal vascularization
- Localized hypoxia
- Defective decidualization and
- Excessive trophoblastic invasion
DIAGNOSIS

• Usually by US
  • Sensitivity % 80
  • Specificity % 95

• MRI
  • Confirm the diagnosis
  • Delineate the presence or extent of accreta

Khan M. Et al Placenta 2013;34:963-6
ANTENATAL DIAGNOSIS

• Prepare and counsel for treatment options and complications
  • Consent for C/S Hysterectomy
  • If placenta is left in situ
    • Inform patient risk of complication (sepsis and delayed hemorrhage)
• Multidisciplinary approach

PRECAUTIONS IN THE ANTENATAL PERIOD

• Hct
• Blood group
• Fe (oral/IV)
• Betamethasone
• Referral to tertiary center
OPTIMAL TIMING OF DELIVERY

### 35-36 w
- In cases of suspected accreta
- In the absence of any bleeding

### 34-35 w
- After steroid administration
- Without AF confirmation of fetal lung maturity

- Optimize outcome for the mother
  - 93% report hemorrhage after 35w
  - shorter OR times,
  - lower frequency of transfusions,
  - lower ICU admission

BALLOON OCCLUSION OF THE AORTA OR INTERNAL ILIAC VESSELS

• Utility?

• Prevent excessive blood loss during resection of the lower uterine segment

• Place into the Int. Iliac A. preop and inflate during the dissection

• There is a need for larger studies / RCT

PROCEDURES

Extirpative Method

C/S Hysterectomy

Conservative Treatment

One-step Conservative Surgery

Placenta accreta with an anterior previa

Vertical fundal incision

Avoid placenta and reduce the risk of massive PPH
EXTIRPATIVE METHOD

- Undiagnosed accreta
- Forcible manual removal
- Higher rate of massive PPH and peripartum hysterectomy

Should be abandoned when other procedures are available

C/S HYSTERECTOMY

- Currently recommended by the ACOG
- Maternal mortality relatively low
- Mortality 7% with placenta percreta

Without attempting to remove the placenta have lower complication rate

Prior to skin incision all required blood products (RBC, FFP, and PLT) should be available.

Decide for balloon occlusion or embolisation catheters.

Individualize choice of anesthesia. Regional anaesthesia may have fetal benefits but it may limit the ability to manipulate the abdominal contents for retractor placement.

Place a ring forceps on the cervix.

Perez-Delboy A, Wright JD. BJOG 2014;121:163–70
Midline vertical incision (exposure)

Inspect entire pelvis

Identify placental abnormalities, Perform hysterotomy away from placenta (Fundal or posterior uterine wall)

Not disrupt placenta after delivery of the infant

Uterotonics

Some reports recommend avoiding to limit placental disruption, Other data suggest that reduce uterine atony and limit uterine bleeding
Use of ancillary procedures ----- No benefit (Prophylactic Int.Iliac A. ligation)

Hysterotomy incision should be closed

Do not perform hysterectomy in a standard fashion

Ligate the vascular channels coursing to the uterus within the retroperitoneum

Visualize ureters, divide utero-ovarian ligaments pack the ovaries

Perez-DelboyA, Wright JD. BJOG 2014;121:163–70
Open vesico-uterine peritoneum, dissect bladder without placental disruption

Ligate uterine a. and its collateral channels, avoid disrupting the wall (thinned and friable)

Dissect until below the placental tissue
Requires additional dissection of the plane between the bladder and uterus/placenta

Often necessary to perform a cystotomy to fully separate the bladder from the uterus
Elevate LUS/cervix
Amputate uterine fundus with placental mass

If hemostasis is obtained cx can be left in situ
(but removal of the entire cervix is often required)

Cauterize or ligate vascular channels along
the posterior wall of the bladder

Indigo carmine (detect damage ureter or bladder)

If a cystotomy was required, close bladder after
ensuring the integrity of the ureteral orifices

Perez-Delboy A, Wright JD. BJOG 2014;121:163–70
PLACENTA PERCRETA WITH BLADDER INVASION

• Bladder is most frequently invaded organ
• Morbidity is severe and high (72.2%)
• Maternal mortality 5.6%
• Preoperative ureteral catheter minimize complications
• Morbidity is low in conservative than radical treatment
URETERAL STENTS?

• Lower morbidity (18% vs 55%, p= 0.018)

• Nonsignificant reduction in ureteral injury (0 vs 7%)

• For considering routine use further evaluation is required

• In recent American surveys – 26-35 % reported using ureteral stents

Transverse uterine incision

Kotsuji F et al BJOG 2013
CONSERVATIVE MANAGEMENT

• Placenta is left in situ for resorption

• Severe long-term complications
  – Hemorrhage and infections
    • 58 % risk of hysterectomy up till 9 months after delivery

If percreta is diagnosed in the operation

Deliver the infant

Leave the placenta

Close the uterus and book the woman for second surgery (local resection or hysterectomy) at a later time and/or at another more resource-advanced hospital (within 24 h)

Fitzpatrick KE et al. BJOG 2014;121:62-71
CONSERVATIVE MANAGEMENT

• Close follow up for development of any complications (weeks to months)

• Most common complication is fever

Endomyometritis or florid sepsis
Inflammatory response to tissue necrosis

Prophylactic broad-spectrum antibiotic should be used

MONITORIZATION OF CONSERVATIVE MANAGEMENT

• No data available

• Prophylactic antibiotics for 5 days

• Discharge on the 8th postop day

Follow up weekly until the complete resorption

**Clinical Examination**
- Bleeding
- Temperature
- Pelvic pain

**Pelvic US**
- Volume of retained tissue

**Laboratory**
- CBC, CRP
- Vaginal culture
CONSERVATIVE MANAGEMENT

- 167 women
- Failure 22 % (required hysterectomy)
  - 18 primary hysterectomy for intraoperative bleeding,
  - 18 underwent a delayed hysterectomy
- Severe morbidity occurred in 10 women
- One death due to MTX complication
- Spontaneous placental resorption (75%)
  - Average interval 13.5 w (range 4-60)

Approximately 10 months after her uterine preservation surgery, the patient had an unplanned repeat pregnancy. At 26 weeks of gestation, ultrasonogram

Fig. 2. Hysterectomy specimen with fundal rupture and recurrent placenta accreta.


Deshpande NA et al Obstet Gynecol 2013;122:475–8
GENTLE REMOVAL OF PLACENTA SUSPECTED ACCRETA?

- Cause severe bleeding with the risk of maternal complications and hysterectomy

- Attempt gently to remove the placenta only in cases of unconvincing findings of accreta

MTX FOR ADJUVANT TREATMENT?

• Acts only on rapidly dividing cells
  – Trophoblastic proliferation does not occur at term
• Controversy regarding effectiveness
• MTX $\rightarrow$ neutropenia or medullary aplasia
• Lack of consensus regarding
  – Optimum dosing, frequency or route of administration

RCOG does not recommend routine use

Preventive uterine devascularization in the absence of bleeding?

- Very limited data to answer
- Preventive devascularization
  - Embolization, BUAL, BHAL
- Less effective in cases of placenta accreta
- May have harmful effects
  - 2 cases of uterine necrosis occurred in 62 women (French study)

Further evaluation is required

ONE-STEP CONSERVATIVE SURGERY

• Resecting the invaded area together with placenta and performing reconstruction

• Palacios et al has reported 45 patients
  – 44 were uneventful and only one was complicated by a recurrence of accreta

!! Achieving hemostasis may be very challenging for an inexperienced team

CONCLUSION

• C/S hysterectomy is “gold standard”

• Conservative treatment is a valid option
  – For percreta with bladder invasion
  – For young women with fertility desire
  – Who agree to close follow-up monitoring

• Prospective PACCRETA study has been launched to answer some of the questions

  In France, 182 centers, 270 000 deliveries annually; 120 placenta accreta
No woman should die giving life!