COMPLICATIONS OF PREGNANCY

PLACENTA ACCRETA

PLACENTA ACCRETA: MANAGEMENT OF A WOMAN WITH SUSPECTED OR CONFIRMED

AIM

To provide clinicians at King Edward Memorial Hospital with a management plan for women who are diagnosed with Placenta Accreta.

DEFINITION

Placenta accreta is a generalized term used when an abnormal, firmly adherent placenta implants with some degree of invasion into the uterus. It occurs as a consequence of partial or complete absence of the decidua basalis and defective formation of the Nitabuch (fibrinoid) layer. In this context it includes the histopathology entities of placenta accreta, placenta increta and placenta percreta.

BACKGROUND

Morbid adherence of the placenta to the uterine wall is a potentially life threatening obstetric complication that frequently requires interventions such as caesarean hysterectomy and high volume blood transfusion. With the rising caesarean delivery rate and increasing maternal age, the incidence of placenta accreta has significantly increased.

CLASSIFICATION

Placenta accreta
- Placenta implants totally/partially/focally through the decidua basalis
- Villi attached to myometrium

Placenta increta
- Villi invade within the myometrium

Placenta percreta
- Villi fully penetrate the myometrium
- May breach the serosa and invade surrounding structures

RISK FACTORS

- (Multiple) Previous CS
- Placenta praevia
- Other uterine surgery
- First CS elective
- IVF pregnancy
KEY POINTS

- Known or highly suspected cases should be managed in KEMH due to the availability of multidisciplinary facilities.
- These cases are potentially the highest risk surgical cases in the hospital and therefore a high level of consultant involvement is expected.
- The lead obstetric team is expected to take ownership of the patient and ensure continuity for the patient’s care throughout the antenatal and delivery period.
- Potential cases are to be reviewed by the Consultant Obstetrician.
- For all cases of placenta praevia, ultrasound reports should specify whether or not there are features of placenta accreta. If this is not specified, the ultrasound is to be repeated. This scan should be performed by a senior member of the ultrasound service and images recorded on PACS.
- A further scan with a senior member of the surgical team present should be considered to assist with surgical planning.
- Once diagnosed, women are to be reviewed and counselled by a Consultant Obstetrician in antenatal clinic or on the antenatal ward at the earliest opportunity.
- Haemoglobin levels and iron stores should be checked and optimised prior to surgery.
- As with all women at risk of major obstetric haemorrhage, those with suspected placenta accreta should be encouraged to remain close to the planned hospital of confinement for the duration of the third trimester of pregnancy.
- Both an elective and an emergency plan should be devised and clearly documented.
- The timing of the caesarean section should consider the desirability of performing it as an elective rather than an emergency procedure.
- It is important to be aware of the ongoing risk of further placental invasion to the uterine serosa and into adjacent organs such as the bladder.
- The caesarean section should usually be undertaken at an earlier gestation than that for uncomplicated placenta praevia.
- The management plan is to be formulated by the primary team (obstetric) and discussed with the secondary team (Gynae Oncology) at consultant level.
- Women with features of probable or actual placenta percreta are to be referred to the oncology team for further discussion once counselled by the Consultant Obstetrician and before a date for surgery has been booked.
- Surgery is preferably booked for Monday mornings in consultation with the Head of Obstetrics.
- Patients should be referred for anaesthetic review once the surgical plan has been determined.

DIAGNOSIS

This is preferably made before 20-24 weeks gestation. Morbidly adherent placenta may be suspected when there is a placenta praevia in a woman with a history of caesarean section or other uterine surgery. The value of making the diagnosis of placenta accreta before birth is that it allows for multidisciplinary planning in an attempt to minimize potential maternal or neonatal morbidity and mortality. The diagnosis is usually established by ultrasonography and occasionally supplemented by magnetic resonance imaging (MRI).

Prenatal diagnosis is a key factor in optimizing the counselling, treatment, and outcome of patients with placenta accreta. Special attention should be paid to the sonographic examinations of those patients with a history of caesarean delivery and subsequent diagnosis of placenta praevia or placenta overlying any other uterine scar. Prenatal diagnosis is associated with reduced maternal morbidity in terms of:

- Reduction of peri-partum blood loss and the need for blood transfusion.
- Planned delivery in an appropriate setting.
- Reduced emergency hysterectomies.
Features contributing to the diagnosis of placenta accreta include:

- **Biochemistry**
  - Second trimester AFP and hCG increased\(^{15}\)

- **Ultrasound**
  - First trimester
    - Gestational sac in LUS\(^{16}\)
    - Irregular vascular spaces in placental bed\(^{17}\)
    - CS scar implantation\(^{3}\)
  - Second trimester
    - The presence of placental vascular lacunae is the most sensitive of all diagnostic markers (80-90% in second trimester)\(^{16, 18}\)
  - Third trimester
    - Loss of hypoechoic placental-myometrial differentiation\(^{19}\)
    - Multiple, complex placental vascular lacunae\(^{3}\)
    - Serosa-bladder interface: disruption, irregularity, vascularity\(^{9}\)

- **MRI\(^{3}\)**
  - Uterine bulging
  - Heterogeneous signal intensity within placenta
  - Dark intraplacental bands
  - Abnormal placental vascularity
  - Focal interruptions in myometrium
  - Tenting of bladder
  - Direction visualisation of invasion of adjacent organs

- **Ultrasound vs MRI**
  - Ultrasound 77-91% sensitive, 95-98% specific, 98% NPV\(^{3, 20, 21}\)
  - MRI 72-90% sensitive, 88% specific\(^{21}\)
  - MRI does not appear to alter maternal outcomes\(^{22}\)
  - MRI may be useful where ultrasound is inconclusive\(^{23}\)
    - Obese
    - Posterior placenta (although can usually access with TVS)
  - Sonography is more available than MRI, less expensive and non-invasive\(^{10}\)

**At KEMH the ultrasound is to be done by a senior member of the ultrasound team - the report is to specify that there are no features of Placenta Accreta. If this is not specified, the ultrasound is to be repeated.**

**PROCEDURE/ MANAGEMENT/ TREATMENT**

**ANTENATAL MANAGEMENT**

As with all women at risk of major obstetric haemorrhage, those with suspected placenta accreta should be encouraged to remain close to the planned hospital of confinement for the duration of the third trimester of pregnancy. An emergency contingency plan is strongly recommended\(^{2}\). These women are not suitable for review by a GP obstetrician, Resident Medical Officer or junior registrar.

**Timing of elective caesarean delivery**

This should be individualised and the decision should be made jointly with the woman, the Obstetrician and Neonatologist as it is usually undertaken at an earlier gestation rather than that for uncomplicated elective caesarean births or uncomplicated placenta praevia\(^{2}\). The timing of surgery should also be confirmed with the Gynae Oncology Department if it is anticipated that their services will be required. Although the evidence does not support any particular gestation for elective delivery, combined maternal and neonatal outcome is optimized in stable patients with a planned delivery at 34 weeks gestation. The gestation for elective delivery should balance the neonatal risks of prematurity against the maternal risks of emergent delivery. In the absence of clear evidence to guide this decision, a plan...
should be made tailored to the individual patient, taking into account the ultrasound findings, history of bleeding, medical comorbidities, surgeon availability and patient preferences. In general, features of placenta percreta would warrant consideration of earlier delivery (i.e. 32-34 weeks), whereas relatively mild cases may be more safely scheduled at 36-36+6 weeks. Deferral of delivery beyond 36+6 weeks is not recommended. Antenatal corticosteroids should be administered prior to delivery at all gestations less than 34 weeks, and considered prior to elective caesarean delivery up to 36+6 weeks.

Among women with suspected placenta accreta, emergency caesarean section is mostly performed in:

- The presence of vaginal bleeding
- PPROM and/or uterine contractions

**Multidisciplinary Antenatal Planning should include input from the Accreta team, comprising:**

- Consultant Obstetrician (primary surgical team)
- Consultant Anaesthetist
- Consultant Haematologist
- Consultant Gynae Oncologist
- Clinical Nurse Consultant (CNC) - Patient Blood Management (PBM) - who liaises with the Obstetrician to optimise haemoglobin during the antenatal period.
- CNC - Anaesthetics to organise intra-operative cell salvage.
- Clinical Midwifery Manager (CMM) - Adult Special Care Unit (ASCU)
- Clinical Nurse Manager (CNM) - Theatre
- Consider liaison with a sonologist to assist with surgical planning

**Elements of the management plan should include:**

- Confirmation of the diagnosis and assessment for evidence of extra uterine invasion, in consultation with a senior sinologist.
- Planned date of surgery - Monday is preferred as the Gynae Oncologist is on site.
- A pre-operative surgical review will confirm:
  - The advice to be given regarding potential outcomes and surgical options
  - The possibility of conservative management
  - The likelihood of hysterectomy
  - Tubal ligation
  - Relevant investigations to be performed including:
    - Assessment and preoperative optimisation of Hb, possibly including iron infusion
    - Repeated ultrasound or MRI
    - Cross-matching and ordering of other blood products as required.
- Operative particulars:
  - Skin incision (midline or Pfannenstiel)
  - Ureteric stenting
  - Interventional radiology
  - Patient positioning (supine or lithotomy)
  - Cell salvage

- Clearly document the plan in the patient’s antenatal notes with a management plan sticker and reference to this plan on the Obstetric Special Instruction sheet (MR004).
- A copy is to be provided to all members of the Accreta team.
- Refer to the [Antenatal Checklist for Suspected Placenta Accreta - Appendix 1 on page 8 of this document](#)

**Preoperative Patient Counselling**

This is to be carried out by the Consultant Obstetrician and is to include:

- The following risk factors
  - Potential need for hysterectomy
  - Risks of profuse haemorrhage
  - Real risk of mortality
- Involve the family in all discussions for medico-legal reasons
- A generic consent form should be completed by the Consultant Obstetrician including all possible treatments including hysterectomy, interventional radiological procedures and conservative management.
REFERRALS

- Patients should be referred to the Anaesthetic Department after placenta accreta has been confirmed and the obstetric plan has been finalised and discussed with the patient. Referral should be via written consultation (faxed to theatre reception 9340 2227) and an email sent to the Anaesthetic Consultant responsible for co-ordinating placenta accreta patients. Refer Booking a patient with Major Placenta Praevia and Accreta (or suspected Accreta).

- The patient should also be referred to the gynae-oncology team after diagnosis has been made and the obstetric plan finalised and the obstetric peri-operative-counselling has been completed. This referral must occur either by email or letter. A discussion between the managing obstetric consultant and the oncology team should occur. Referral and discussion regarding the surgical plan must be at consultant level.

Information to include in the referral:
- Likelihood of a Placenta Accreta
- Patient positioning – supine or lithotomy
- Planned skin incision
- Name of the surgeon performing the caesarean section
- Name of the surgeon performing the hysterectomy (if necessary)
- Planned date of surgery if known.
- Most recent haemoglobin level

- Referral to the Consultant Haematologist.

Pre-Operative Investigations

To be completed one week prior to planned, confirmed surgery:
- Full blood picture
- Coagulation profile
- ROTEM
- Group and Screen and
- Cross-match 4-Units

Refer to the following Transfusion Medicine Guidelines:
2.5 The Role of the Group and Hold Request
2.9 Maximum Surgical Blood Order Schedule

REFERENCES


REFERENCES (STANDARDS)

National Standards – 1 Clinical Care Is Guided by Current Best Practice
12.3 Care Planning and Delivery

Legislation - Nil

Related Guidelines – Transfusion Medicine
Booking a Patient with Major Placenta Praevia or Accreta Other

related documents – Nil

RESPONSIBILITY

Policy Sponsor HoD Obstetrics
Initial Endorsement July 2014

Last Reviewed

Last Amended

Review date July 2017

Do not keep printed versions of guidelines as currency of information cannot be guaranteed. Access the current version from the WNHS website.
# APPENDIX 1

## Antenatal Checklist for Suspected Placenta Accreta

<table>
<thead>
<tr>
<th>Date</th>
<th>Name</th>
<th>UMRN</th>
<th>Primary Consultant Obstetrician</th>
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### History

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<tr>
<th>Age</th>
<th>Parity</th>
<th>EDC</th>
<th>BMI</th>
<th>Previous CS/uterine surgery (number/type)</th>
<th>Desire for future fertility</th>
<th>Episodes of APH</th>
<th>Antenatal corticosteroids</th>
<th>Consents to blood products: Yes / No</th>
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### Ultrasound/MRI: Date/Gestation

- Placenta: Anterior/Posterior
- Praevia: Yes/No
- Signs of accreta: Lacunae/Loss of placental-myometrial echolucency
- Signs of percreta: Evidence of extrauterine invasion – bladder/other
- MRI findings (if required)

### Antenatal Management

- Admission plan
- Optimise Hb: Hb: Date: Ferritin: Date:
- Blood group and Ab screen
- Referrals:
  - Gynaecological oncologist
  - Anaesthetist
  - Haematologist

### Surgical Plan

- Placental removal / Hysterectomy / Conservative
- Interventional radiology
- Position: Supine / Lithotomy
- Cystoscopy/Ureteric stenting: Yes / No
- Incision: Midline / Pfannenstiel
- Cell salvage: Yes / No
- Date / Gestation:
- Obstetrician:
- Other surgeon(s):

### Checklist

- Notifications:
  - HOD Obstetrics
  - Gynaecological oncology
  - Anaesthetics
  - Haematology
  - CNM ASCU
  - CNM Patient blood management
  - CNM Theatre
  - CNM Anaesthetics
  - Consent
  - Preop bloods: FBP / Xmatch ___ units

Form Completed by

- Name ..................................... Signature ........................................ Date ......................