MANAGEMENT OF ACUTELY INVERTED UTERUS

CLINICAL GUIDELINES
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RCOG guideline

CQC Fundamental Standard: 9, 12

Consulted With

Post/Committee/Group

Date

Anita Rao/
Alison Cuthbertson
Anita Dutta
Sam Brayshaw
Alison Cuthbertson
Paula Hollis
Chris Berner
Ros Bullen-Bell
Susie Denhart
Deborah Lepley
Claire Fitzgerald

Clinical Director for Women’s and Children’s Division
Consultant for Obstetrics and Gynaecology
Anaesthetic Consultant
Head of Midwifery
Lead Midwife Acute Inpatient Services
Lead Midwife Clinical Governance
Lead Midwife Community Services
Practice Development Midwife
Senior Librarian, Warner Librarian
Pharmacist

November 2017

Professionally Approved By

Dr Rao
Lead Consultant for Obstetrics and Gynaecology
November 2017

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Author/Contact for Information Anita Dutta, Obstetric Consultant

Policy to be followed by (target staff) Midwives, Obstetricians, Paediatricians

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Related Trust Policies (to be read in conjunction with)
04071 Standard Infection Prevention
04072 Hand Hygiene
06036 Guideline for Maternity Record Keeping including Documentation in Handheld Records
04234 Postpartum haemorrhage
04245 Retained placenta

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A. Appendix A - Pathway for Management of Acute Uterine Inversion
1.0 Purpose

1.1 Acute uterine inversion is a rare and serious obstetric emergency. Prompt uterine replacement reduces morbidity and mortality: this guideline raises the awareness of uterine inversion: to aid timely recognition and appropriate management.

2.0 Equality and Diversity

2.1 Mid Essex Hospital Services NHS Trust is committed to the provision of a service that is fair, accessible and meets the needs of all individuals.

3.0 Incidence

3.1 The incidence of acute uterine inversion varies greatly; published data suggest an incidence of between 1/2304 and 1/10,044. Our knowledge of inversion tends to be based on case studies and the majority of UK Obstetric teaching would describe it as very rare. However, the largest series of case reports from Canada in 2002 puts the incidence at 1:3737. A unit the size of Mid Essex could expect 1-2 cases per annum.

4.0 Risk Factors

Women with pre-existing risk factors for uterine inversion should be recommended delivery on the Consultant led unit.

- No risk factor 50%
- Mismanagement of third stage:
  - Premature/excessive traction of umbilical cord
  - Fundal pressure before separation of placenta
- Uterine atony
- Abnormal adherence of placenta
  - Manual removal of placenta
  - Fundal implantation of morbidly adherent placenta
  - Placenta praevia
- Previous uterine inversion
- Precipitate labour
- Vaginal birth after Caesarean Section
- Short umbilical cord
- Connective tissue disorder
  - Ehlers-Danlos Syndrome
  - Marfan’s Syndrome
- Tocolytic drugs
- Unicornuate uterus
5.0 Classification

<table>
<thead>
<tr>
<th>Degree</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st (Incomplete)</td>
<td>The inverted fundus extends to but not beyond, the cervical ring</td>
</tr>
<tr>
<td>2nd (Incomplete)</td>
<td>The inverted fundus extends through the cervical ring but remains within the vagina</td>
</tr>
<tr>
<td>3rd (Complete)</td>
<td>The inverted fundus extends down to the introitus</td>
</tr>
<tr>
<td>4th (Total)</td>
<td>The vagina is also inverted.</td>
</tr>
</tbody>
</table>

6.0 Presentation

6.1 Signs and symptoms include:
- Haemorrhage (94% of cases)
- Shock out of proportion to blood loss (vagal stimulation)
- Severe pain in third stage
- Fundus not palpable
- Mass in vagina or outside introitus

7.0 Principles of Management
(Refer to the guideline entitled ‘Postpartum Haemorrhage’; register number 04234)

7.1 Repositioning of the uterus and resuscitation must be undertaken simultaneously. The quickest way to treat neurogenic shock is to replace the uterus.

7.2 Do not attempt to remove the placenta until inversion has been corrected.

7.3 Once the uterus has been repositioned it should be held in place for a few minutes while oxytocics are administered to prevent reinversion.

7.4 Appropriate antibiotic cover should be given.

7.5 Use of tocolytics to relax the constriction ring is controversial as they may aggravate the postpartum haemorrhage, rather than pursuing the use of these on a conscious woman an early transfer to theatre for general anaesthesia is recommended.

7.6 If using tocolysis in theatre terbutaline 0.25mg S/C is recommended as first line due to its short half life, ease of use and familiarity to the obstetrician.

8.0 Non-surgical Management

8.1 Manual replacement (Johnson’s Maneouvre)
- The uterus must be lifted into the abdomen, above the level of the umbilicus, before repositioning can occur. The passive action of the uterine ligaments will rectify the inversion. (43-88% Successful)
- Place hand plus two-thirds of forearm in the vagina.
- Keeping fingers at cervico-uterine junction and resting fundus in palm, lift the uterus above the level of umbilicus.
• Timing is crucial, if the uterus can be repositioned before uterine oedema and a constriction ring forms it will be much easier to achieve.
• This should be attempted at diagnosis of inversion; if it is unsuccessful then transfer to theatre for general anaesthetic would be necessary before trying other methods.

8.2 Hydrostatic methods

8.2.1 Uterine rupture must be excluded prior to attempting hydrostatic reduction of an inverted uterus.

8.2.2 The O’Sullivan Technique
Infuse warm saline into the vagina from a pressure bag. The infusion tube is held in the vagina whilst the introitus is blocked by the operators hand.

8.2.3 Silastic cup technique
Connect a 6cm silastic cup to a Weary (Y connector) which is in turn connected to two 1litre bags of warm saline each on a pressure bag. Place the silic cup inside the vagina and infuse the fluid. The hydrostatic pressure generated will gradually restore the uterine position.

9.0 Laparotomy

9.1 Huntington’s Operation

9.1.1 At laparotomy the inversion site appears crater-like, with indrawn fallopian tubes and round ligaments. Allis forceps are used to grasp each side of the crater with gentle upwards traction and replacement of the forceps on the advancing fundus. The uterus is thereby pulled out of the constriction ring and normal position is restored.

9.1.2 A similar technique has recently been described using a silastic cup placed inside the crater to correct the fundal position, it was noted to be gentle on the tissues and easy to negotiate the constriction ring.

9.2 Haultain’s Operation

9.2.1 At laparotomy the cervical constriction ring is incised with a posterior longitudinal hysterotomy. The uterus is then replaced as per Huntington’s method. Once anatomy is restored the hysterectomy is repaired with interrupted sutures.

10.0 Staffing and Training

10.1 All midwifery and obstetric staff must attend yearly mandatory training which includes skills and drills training.

10.2 All midwifery and obstetric staff are to ensure that their knowledge and skills are up-to-date in order to complete their portfolio for appraisal.

11.0 Professional Midwifery Advocates

11.1 Professional Midwifery Advocates provide a mechanism of support and guidance to women and midwives. Professional Midwifery Advocates are experienced practising midwives who have undertaken further education in order to supervise midwifery services and to advise and support midwives and women in their care choices.
12.0 Infection Prevention

12.1 All staff should follow Trust guidelines on infection control by ensuring that they effectively ‘decontaminate their hands’ before and after each procedure.

12.2 All staff should ensure that they follow Trust guidelines on infection prevention. All invasive devices must be inserted and cared for using High Impact Intervention guidelines to reduce the risk of infection and deliver safe care. This care should be recorded in the Saving Lives High Impact Intervention Monitoring Tool Paperwork (Medical Devices).

13.0 Audit and Monitoring

13.1 Audit of compliance with this guideline will be considered on an annual audit basis in accordance with the Clinical Audit Strategy and Policy (register number 08076), the Corporate Clinical Audit and Quality Improvement Project Plan and the Maternity annual audit work plan; to encompass national and local audit and clinical governance identifying key harm themes. The Women’s and Children’s Clinical Audit Group will identify a lead for the audit.

13.2 The findings of the audit will be reported to and approved by the Multi-disciplinary Risk Management Group (MRMG) and an action plan with named leads and timescales will be developed to address any identified deficiencies. Performance against the action plan will be monitored by this group at subsequent meetings.

13.3 The audit report will be reported to the monthly Directorate Governance Meeting (DGM) and significant concerns relating to compliance will be entered on the local Risk Assurance Framework.

13.4 Key findings and learning points from the audit will be submitted to the Clinical Governance Group within the integrated learning report.

14.0 Communication

14.1 A quarterly ‘maternity newsletter’ is issued and available to all staff including an update on the latest ‘guidelines’ information such as a list of newly approved guidelines for staff to acknowledge and familiarise themselves with and practice accordingly.

14.2 Approved guidelines are published monthly in the Trust’s Staff Focus that is sent via email to all staff.

14.3 Approved guidelines will be disseminated to appropriate staff quarterly via email.

14.4 Regular memos are posted on the ‘Risk Management’ notice boards in each clinical area to notify staff of the latest revised guidelines and how to access guidelines via the intranet or clinical guideline folders.

15.0 References


Haultain FWN. The treatment of chronic uterine inversion by abdominal hysterectomy, with a successful case. British Medical Journal 1901;2: 974-976

Appendix A

Pathway for Management of Acute Uterine Inversion

Call for help

Immediate manual replacement and simultaneous resuscitation

Successful
Remove placenta, massage, oxytocic agents, antibiotics

Unsuccessful
Woman not in shock
Give uterine relaxant: intravenous/subcutaneous terbutaline 0.25 mg
Manual or hydrostatic replacement

Unsuccessful

Unsuccessful
Woman in shock
General anaesthesia

If all these measures fail, proceed to laparotomy (<3%)