Bladder care postpartum including bladder care for women with epidural analgesia (GL792)

Approval

<table>
<thead>
<tr>
<th>Approval Group</th>
<th>Job Title, Chair of Committee</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maternity &amp; Children's Services Clinical Governance Committee</td>
<td>Chair, Maternity Clinical Governance Committee</td>
<td>1st September 2017</td>
</tr>
</tbody>
</table>

Change History

<table>
<thead>
<tr>
<th>Version</th>
<th>Date</th>
<th>Author, job title</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0</td>
<td>March 2012</td>
<td>P Street (Consultant Obstetrician), F Garcia (Staff grade Obs &amp; gynae)</td>
<td>Reviewed</td>
</tr>
<tr>
<td>4.1</td>
<td>Jan 2013</td>
<td>P Street (Consultant Obstetrician), W Kuteesa (Consultant Gynaecologist)</td>
<td>Additional of updated flowcharts</td>
</tr>
<tr>
<td>4.2</td>
<td>Feb 2013</td>
<td>P Street (Consultant Obstetrician)</td>
<td></td>
</tr>
<tr>
<td>5.0</td>
<td>Sept 2014</td>
<td>P Street, W Kuteesa, A Weavers</td>
<td>Reviewed</td>
</tr>
<tr>
<td>6.0</td>
<td>Aug 2016</td>
<td>S Bailey (Marsh Ward mngr)</td>
<td>Reviewed</td>
</tr>
<tr>
<td>7.0</td>
<td>June 17</td>
<td>G Jackson, S Hazbun, S Bailey, S Phillip</td>
<td>Merge of GL973 into this guidance and reviewed</td>
</tr>
</tbody>
</table>
**Overview:** Postpartum urinary retention is not a well understood clinical condition. The incidence varies in literature between 0.05 to 14.1% after vaginal delivery and between 3.3 to 24.1% after caesarean section.

Good intrapartum bladder care and prevention of postpartum urinary retention, are of great clinical importance. If voiding dysfunction goes unrecognised the bladder will over distend leading to bladder denervation and permanent bladder damage, increased risk of UTI's and upper urinary tract damage.

Regardless of whether they were catheterised during labour/delivery or not, all women should be able to void spontaneously six hours after delivery or removal of their catheter. If delivery was by assisted vaginal delivery or an emergency caesarean section, the catheter should be left for 12 – 24 hours or until the next morning, whichever applies in their situation. Following an elective caesarean section the catheter should be removed by 12 hours unless otherwise advised. They should void in excess of 200ml at this time.

**Predisposing factors:**
- long labours especially prolonged second stage of labour
- nulliparity
- macrosomia or increased birth weight
- instrumental deliveries especially forceps
- extensive vaginal and perineal lacerations
- vaginal delivery after caesarean section
- epidural analgesia

Urinary retention/dysfunction can persist postpartum and should be highlighted on handover to postnatal ward and recorded in the postnatal maternal and neonatal record. However, it is impossible to predict who will develop retention of urine so all women should be regarded at risk.

**Clinical presentation:**

Normal maximum bladder volume is between 400 and 600mls. Some postnatal mothers will report voiding of ‘reasonable amounts’ but with urinary frequency. If the voided volume is less than 150ml, the mother may have COVERT URINARY RETENTION. Other postnatal mothers will present with an inability to pass urine within six hours of delivery. When these mothers are catheterised, the volume of urine obtained if typically more than 4-600ml. This is OVERT URINARY RETENTION.
Prevention of acute postpartum urinary retention:

- If the mother has had a regional anaesthetic (spinal or epidural) then her immediate post-partum care should be as described in section below (page 6) ‘Bladder care for women with epidural anaesthesia’.
- If the mother is not transferred to the postnatal ward with an indwelling urinary catheter, or once it has been removed, she should be assessed six hours later.
- Document time and volume of first void in the maternal postnatal and record on page 5 where indicated.
- At each postnatal check up
  - Ask the woman about her urinary function using the assessment tool (Appendix 1) as a guide. Urine volumes of at least 150 ml should be voided at least three times in 24 hours.
  - Document subsequent voids using the postnatal stickers.
  - A physical examination should include abdominal palpation for a palpable bladder and perineal examination to exclude haematoma or infection.
- Efforts should be made to assist the woman to empty her bladder e.g. running the taps, bath or shower or have a warm bath or shower.
- Offer regular analgesia for comfort

Management of urinary retention:

- If within six hours a woman has not passed urine, or manifested signs and symptoms of retention of urine, measure the residual volume of urine using ultrasound *(measure the bladder in two planes at 90° to each other, calculate a radius based on these two measurements, and thence the approximate volume, using the formula for volume $\frac{4}{3} \pi r^3$)*
  *scans can be done by Physios or Uro-gynaecology nurse from Pelvic floor clinic, or by a specialty trainee / doctor who has completed the scanning module in the RCOG core log book.
- If the volume is >200ml insert Foley catheter, commence fluid balance chart and record intake and output.
- Send MSU and institute antibiotic therapy as appropriate.
• The catheter should remain in situ for 48 hours. All staff should be made aware of this by documenting in the woman’s postnatal maternal and neonatal record and on the in-patient information system.

• On removal of the catheter, measure urine output for the next six hours and perform a bladder scan, if available or catheterise to measure residual volume. If retention recurs, a further Foley should be inserted and the bladder drained for another 48 hours and inform consultant on call.

• If the repeat trial of void fails, catheterise again and contact the on-call team.

• The mother may be discharged with Foley's catheter and bag or be taught self catheterisation.

• Insertion of a supra-pubic catheter may be considered for some mothers.

Please see appendices below for:

• Interpretation Guidance for Midwives Assessment Tool on Postnatal Bladder Care (App 1 below)
• Initial Management of Overt Puerperal Urinary Retention (App 2 below)
• Management of Trial Without Catheter (TWOC) (App 3 below)
• Management of Supra-Pubic Catheter in Post-Partum Urinary Retention (App 4 below)

Auditable standards:

1. The time of the first void after delivery will be documented in the postnatal booklet on page 5 for all women.

2. The consultant obstetrician will be informed of any urine retention of > 500mls. This will be documented in the maternal health care record using the postnatal stickers.

3. All women who have a supra pubic catheter inserted and whose post void residual is consistently >100 and/or post void residual is consistently > voided volume after 7 days will be referred to Catheter Clinic. All referrals for specialist bladder care in the postnatal period will be documented in the postnatal maternity record.
References:


6. NICE clinical guideline 37 – Postnatal care. Page 18 1.2.53 – 1.2.57

Bladder care for women with epidural anaesthesia

Overview: Obstetric regional anaesthesia temporarily impairs bladder sensation. Over distension and atony may follow.

On establishing epidural analgesia or neuraxial (spinal or epidural) anaesthesia

- catheterise with Ch 12 gauge Foley
- inflate balloon with 5ml water max.
- start fluid balance chart
- deflate balloon for delivery
- do not electively remove catheter and replace if it falls out

Removal of catheters

- after SVD, remove on return of bladder sensation and ability to weight bear
- after any emergency assisted delivery in theatre the catheter should remain in place for 12 hours
- after any LSCS the catheter should remain in place for at least 12 hours and preferably 24 be removed after 12 hours (in line with enhanced care practice) - providing the mother is mobile and observations are stable
- Midwife to ask postnatal mother whether she feels she is passing normal volumes and has fully emptied her bladder
- Measure first void following catheter removal

References

2. Royal Berkshire NHS Foundation Trust Maternity information leaflet – “Having a booked (elective) caesarean section”
Appendix 1 - Interpretation Guidance for Midwives Assessment Tool on Postnatal Bladder Care

**Interpretation Guidance for Midwives**

**Assessment Tool on Postnatal Bladder Care**

<table>
<thead>
<tr>
<th>Signs and symptoms: all abnormal</th>
<th>Could mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>I pass urine more than 7 times in a day</td>
<td>Retention/Infection</td>
</tr>
<tr>
<td>When I need to pass urine it is urgent</td>
<td>Retention/Infection</td>
</tr>
<tr>
<td>Urine leaks from me when I urgently need to go to the toilet</td>
<td>Retention/Infection</td>
</tr>
<tr>
<td>When I pass urine it is only a dribble</td>
<td>Retention/Infection</td>
</tr>
<tr>
<td>It hurts when I pass urine</td>
<td>Infection</td>
</tr>
<tr>
<td>I have to strain to pass urine</td>
<td>Retention</td>
</tr>
<tr>
<td>My bladder dribbles after passing urine</td>
<td>Retention/infection</td>
</tr>
<tr>
<td>When I have passed urine I have to sit down and pass urine again</td>
<td>Retention/infection</td>
</tr>
<tr>
<td>I have to press over my bladder to empty it</td>
<td>Retention</td>
</tr>
<tr>
<td>I have to lean backwards to empty my bladder</td>
<td>Retention</td>
</tr>
<tr>
<td>I feel I do not empty my bladder fully</td>
<td>Retention</td>
</tr>
<tr>
<td>Urine leaks from me when I cough, laugh, sneeze or move</td>
<td>Retention/Incontinence</td>
</tr>
<tr>
<td>I am leaking urine all the time</td>
<td>Retention/Fistula</td>
</tr>
</tbody>
</table>

Recommended actions when the above signs are ticked on assessment tool:

**Possibility of Retention**

**Abdominal palpation – is bladder palpable?**

- **YES**
  - Encourage void - <150mls.
  - In/Out catheter
  - Measure volume
  - Strict fluid balance for 24 Hours

- **NO**
  - Monitor fluid Balance 24hrs
  - Consider perineal pain & soft measures to encourage voiding – monitor condition

- If symptoms persist
  - Indwelling catheter
  - Inform medical aid

**Possibility of Fistula:**
- Inform medical staff immediately

**Possibility of Infection:**
- Take MSU & Inform Medical Staff/GP

**Possibility of Incontinence:**
- Teach pelvic floor exercises and arrange a physiotherapy referral

---

**Author:** Christine Harding
**Job Title:** Consultant Midwife
**Date:** October 2016
**Review Date:** October 2018
**Policy Lead:** Group Director Urgent Care
**Version:** V4.0 ratified 7th Oct 2016 Mat CG mtg
**Location:** Policy hub/ Clinical/ Maternity/ Flowcharts & screening pathways

---

**Author:** Sarah Bailey, G Jackson, S Hazbun, S Phillip
**Job Title:** Marsh Ward Manager, Consultant Anaesthetist, Consultant Obstetrician
**Date:** September 2017
**Review Date:** September 2019
**Policy Lead:** Group Director Urgent Care
**Version:** V7.0 ratified 1/9/17 Mat CG mtg
**Location:** Policy hub/ Clinical/ Maternity / Postnatal/ GL792
Appendix 2 - Initial Management of Overt Puerperal Urinary Retention (EMA085)

INITIAL MANAGEMENT OF URINARY RETENTION IN PREGNANCY – EMA085

No void for 4 hours following previous void or removal of catheter

Check bladder volume with USS or “in-and-out” catheter

Measure next voided volume & Post Void Residual by USS after 2-4 hours
(to be arranged with on-call Consultant)

Post Void Residual < 100ml

No further action

Post Void Residual >=200ml (i.e. Post Void Residual not accumulating)

Post Void Residual 100 – 200ml

Post Void Residual > 200ml Or Patient unable to void

- Do not empty the bladder
- Instruct patient to pass urine as required
- Measure and record each voided volume
- Repeat Post Void Residual in 2 hours

Post Void Residual > 200ml (i.e. Post Void Residual accumulating)

- Ward urinalysis & CSU
- Clinical Incident Form
- Inform Consultant
- Consider: Analgesics Laxatives Ice packs Antibiotics

Perineum painful or swollen

Insert 12 Fr urethral catheter

- Review weekly on DAU until pain and swelling improve
- Consultant review at second week

Perineum neither swollen nor painful

Insert 12 Fr urethral catheter for 48 hours

Trial Without Catheter
(see ECP on Acute Urinary retention (GL714) for TWOC referral form)

< 500 ml

Post Void Residual < 100ml

No further action

Post Void Residual >=200ml (i.e. Post Void Residual not accumulating)

Post Void Residual 100 – 200ml

Post Void Residual > 200ml Or Patient unable to void

- Do not empty the bladder
- Instruct patient to pass urine as required
- Measure and record each voided volume
- Repeat Post Void Residual in 2 hours

Post Void Residual > 200ml (i.e. Post Void Residual accumulating)

- Ward urinalysis & CSU
- Clinical Incident Form
- Inform Consultant
- Consider: Analgesics Laxatives Ice packs Antibiotics

Perineum painful or swollen

Insert 12 Fr urethral catheter

- Review weekly on DAU until pain and swelling improve
- Consultant review at second week

Perineum neither swollen nor painful

Insert 12 Fr urethral catheter for 48 hours

Trial Without Catheter
(see ECP on Acute Urinary retention (GL714) for TWOC referral form)
Appendix 3 – Management of Supra-Pubic Catheter in Post-Partum Urinary Retention (EMA086)

MANAGEMENT OF SUPRA-PUBLIC CATHETER IN POST-PARTUM URINARY RETENTION – EMA086

Supra-public catheter inserted plus Flip valve (or clamp catheter)

Instruct patient to:
- Void uretherally as required (but at least every 2 hours)
- Record the Voided Volume on chart provided
- Record a Post Void Residual every 4 hours on chart provided
- Leave catheter on free drainage every night
- Clamp the catheter every morning and repeat the above regime
- Go home and follow this regime
- Telephone or visit DAU daily with these records – every 2 days if PVR remains >100ml consecutive readings, invite patient to DAU for removal of catheter

When Post Void Residual <100ml on at least two consecutive occasions:
Invite patient to DAU and remove catheter
(See guideline for Supra-Pubic catheter removal)

If, after 7 days:
- The Post Void Residual is consistently >100ml, and/or
- The Post Void Residual is consistently > Voided Volume:
1. Invite the patient to DAU
2. Obtain a CSU for on-site urinalysis and then send to microbiology
3. Instruct the patient to continue with the catheter clamping regime and record Voided Volumes and Post Void Residual’s
4. Physio / midwife to teach double “emptying / tipping forward”
5. Make an appointment for the patient to attend the next available gynaecology procedures to learn Intermittent Self Catheterisation (ISC)
6. DAU to complete Referral letter

CATHETER CLINIC *
Patients referred to the Catheter Clinic will need to attend with:
- A referral letter outlining details of the delivery and subsequent bladder problems
- The complete record of her Voided Volumes and Post Void Residual’s since insertion of the supra-public catheter
- A copy of the urinalysis report from the DAU appointment at the time of referral

* Patients referred to the Catheter Clinic will need to attend with:
- A referral letter outlining details of the delivery and subsequent bladder problems
- The complete record of her Voided Volumes and Post Void Residual’s since insertion of the supra-public catheter
- A copy of the urinalysis report from the DAU appointment at the time of referral

Author: Sarah Bailey, G Jackson, S Hazbun, S Phillip  Date: September 2017
Job Title: Marsh Ward Manager, Consultant Anaesthetist, Consultant Obstetrician  Review Date: September 2019
Policy Lead: Group Director Urgent Care  Version: V7.0 ratified 1/9/17 Mat CG mtg
Location: Policy hub/ Clinical/ Maternity / Postnatal/ GL792
Appendix 4 – Management of Trial without Catheter (TWOC) – EMA087

MANAGEMENT OF TRIAL WITHOUT CATHETER (TWOC) – EMA087

- Admit patient to DAU & inform on-call Consultant
- CSU (dip-test & culture)
- Remove catheter by 9am
- Keep patient Nil by mouth (in case she needs Supra-Pubic catheter later)
- Insert IV cannula and infuse 1litre crystalloid over 4 hours then 1 litre every 6-8 hours, to maintain hydration and encourage diuresis
- Instruct to void every 2 hours (or sooner if necessary)
- Record *every* voided volume
- After 4 hours, measure Post Void Residual by USS

**Post Void Residual > 200ml**

- Learn to double empty & tip forward if still >200mls

**Post Void Residual 100 - 200ml by USS**

- Do not empty the bladder
- Instruct patient to pass urine as required, double empty & tip forward each time
- Measure and record each voided volume
- Repeat Post Void Residual in 2 hours

**On-call Team to insert Supra-pubic catheter under local or general anaesthetic**

(see guideline on Supra-pubic catheter management)

- Follow Guideline on Supra-pubic catheter management
- Inform Pelvic Floor Team

**Post Void Residual > 200ml**

(i.e Post Void Residual accumulating)

**Post Void Residual <= 200ml**

(i.e. Post Void Residual not accumulating)

**Post Void Residual < 100ml**

- Do not empty the bladder
- Instruct patient to pass urine as required, double empty & tip forward each time
- Measure and record each voided volume
- Repeat Post Void Residual in 2 hours

No further action