University Hospitals Plymouth NHS Trust

MATERNITY GUIDELINES

Repair of Perineal trauma, including 3rd and 4th degree tear

Navigation
Guidance document – in the contents page the Press Ctrl on your keyboard and click on a heading to navigate to that section in this document.

Contents

Midwives and obstetricians should be aware that suturing is a major and often traumatic event for women. Approximately 85% of women having a vaginal birth will sustain perineal trauma

1. Classification of genital trauma

GRADE OF TEAR	FEATURES
First degree	Injury to the perineal skin only
Second degree	Injury to the perineal muscles
Third degree ● Grade 3a ● Grade 3b ● Grade 3c	Injury to the perineal muscles AND disruption to the anal sphincter muscles <50% thickness of EAS (external anal sphincter) torn >50% thickness of EAS torn IAS (internal anal sphincter) also torn
Fourth degree	Disruption of both the anal sphincters and rectal epithelium
Button Hole injury	A vaginal tear that breaches the anal mucosa but does not involve the muscles of the anal sphincters.
Labial injury	Injury to the labia

2. Risk factors for OASI (obstetric anal sphincter injury)

- First vaginal delivery (including VBAC).
- Instrumental delivery (forceps without episiotomy has highest rate of OASI).
- Difficult delivery including: forceps, ventouse, shoulder dystocia, long second stage, oxytocin augmentation.
- Poor control at point of birth; waterbirth, BBA, no Manual Perineal Protection. Good communication is essential for a slow and controlled delivery.
- Large baby >4kg, OP position, large HC, post maturity, compound presentation (Hand delivered alongside head).
- Precipitate/rapid labour.
- Previous OASI, short perineum, scarred perineum, Asian ethnicity, FGM.

- Short stature (research shows that short statue under 5f 2/ 158cm is a risk factor for pelvic floor trauma)
- Advancing maternal age

3. Training in repair and OASI prevention

The repair of the perineum is an important part of continuing care of a woman during labour and delivery. The trust and support that develop between a woman and her midwife can make the experience of suturing less traumatic. Women prefer to be sutured by their own midwife.

- A registered midwife may repair 1st and 2nd degree tears, episiotomies and labial tears.
- OASI and more complex labial/perineal tears should be undertaken by the obstetric registrar or consultant.
- All relevant healthcare professionals should attend specific training in perineal / genital assessment and repair, and ensure that they maintain these skills.

Suturing workshops are timetabled throughout the year. These can be booked via Practice Development (plh-tr.MidwiferyPracticeDev@nhs.net). The workshops are aimed at midwives, doctors or students, to update, enhance or learn current suturing techniques in perineal and labial trauma.

An annual **OASI study day** run by Plymouth is highly recommended. It is relevant to all members of the obstetric and midwifery staff. It includes the latest research, practical sessions on OASI repair and OASI prevention. This is currently free to local staff and can be booked via Sarah Hooper. It is normally held in July, see posters for more details.

4. Prevention of OASI

Prevention techniques should be used for all vaginal deliveries to minimise the risk of OASI due to the catastrophic impact OASI can have on a woman's longer term wellbeing. After 5 years 53% of women who sustain OASI will have some symptoms of anal incontinence (including urgency and incontinence of flatus).

At the 34 or 36 week antenatal appointment all women should be given the booklet *'Perineal tears - Advice for mums-to-be'* and a signed OASI sticker applied to the birth plan page in her handheld notes. These both highlight to women the risk of OASI and gives simple preventative advice to women (see appendix 1).

The OASI Care Bundle is recommended for all vaginal deliveries (waterbirth exempt).

1.**Discuss** risk & OASI care bundle

2. **Episiotomy**, when indicated, at 60 degrees at crowning.

3. Use of **manual perineal protection** whenever possible. The only instance where it may not be possible to use MPP, is when women are labouring in water or, on a birthing stool, all other positions should allow for the attending clinician to visualise the perineum and use their hands to support it at ti

Posterior shoulder delivered while MPP continues.

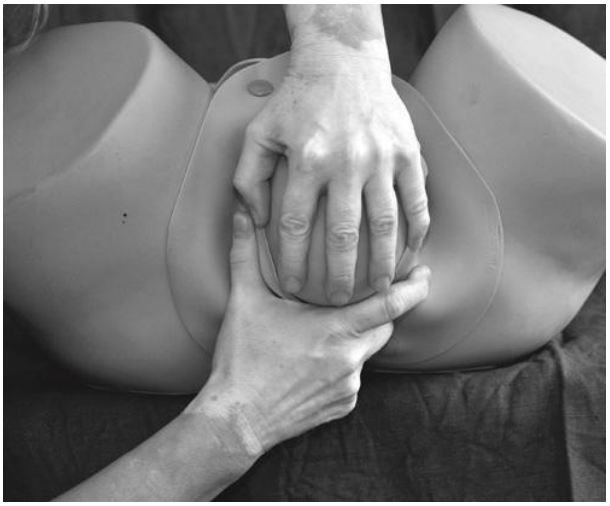
4. **Perineal examination**, including a per rectum examination, carried out following all vaginal deliveries. Thorough & systematic.

Antenatally advice should include (all information in booklet *'Perineal tears-advice for mums-to-be'*);

- Perineal massage from 35 weeks
- Pelvic floor exercises
- Brief description of risk factors and preventative techniques
- Encouraging optimum position of the baby (OA)
- Birth positions

In labour where possible and not compromising the fetus, use the following techniques:

- Most importantly, a slow and controlled delivery of the head.
- MPP (manual perineal protection) using specific OASI care bundle technique (see image below).



- **Continue MPP during delivery of the posterior shoulder. A second assistant may be required to perform MPP during a difficult delivery or instrumental**.
- Using a warm compress on the stretching perineum (this can also relieve discomfort for the woman).
- Episiotomy when required at a 60 degree angle, ideally with **Epi-scissors®**.
- Allow natural expulsive efforts rather than forced, instructive pushing.
- Deliver baby in optimal position - lateral, all fours, semi-recumbent. Avoid squatting, birthing stools and lithotomy where possible.
- Women choosing a waterbirth should not be dissuaded from using water for analgesia in the 1st stage of labour. If a woman has multiple risk factors for OASI then recommend they deliver out of the pool from the start of the 2nd stage. This is due to the increased risk of an OASI when delivering underwater-probably due to poor visualisation, no MPP and a quicker 2nd stage.

5. Assessment

Systematic assessment including PR examination after every delivery is vital to correctly diagnose trauma. Of those women suffering anal incontinence after childbirth, 50% were found to have an incorrect assessment and an OASI missed.

Training in PR examinations is vital for correct diagnosis of OASI. The woman should be referred to a more experienced healthcare professional if uncertainty exists as to the nature or extent of the trauma sustained. All relevant healthcare professionals should attend hands on training in perineal/genital assessment and repair and ensure that they maintain these skills. This is included in the training session mentioned in section 3.

- Before assessing for genital / perineal trauma, healthcare professionals should:
    - Explain to the woman what they plan to do and why.
    - Offer analgesia.
    - Ensure good lighting.
    - Position the woman so that she is comfortable and so that the genital structures can be seen clearly (usually lithotomy if in hospital).

- The timing of this systematic assessment should not interfere with mother–infant bonding unless there is bleeding that requires urgent attention.
- The initial examination should be performed gently and with sensitivity and may be done in the immediate period following birth.
- Systematic assessment with PR examination should be carried out following all vaginal deliveries including women with apparently an intact perineum and should include:
    - Further explanation of what is planned, why and consent obtained from the woman to continue.
    - Confirmation by the woman that analgesia is adequate.
    - Visual assessment of the trauma, the structures involved, the apex of the injury and assessment of bleeding.
    - PR examination to assess whether there has been any damage to anal sphincters.
- Seek advice from more experienced staff if there is an uncertainty about the nature or extent of the trauma.

6. Perineal repair

- 1st degree tears do not need to be sutured if the skin is in alignment and there is no bleeding.
- Difficult trauma should be repaired by an experienced operator in theatre under regional or general anaesthesia. It may be necessary to insert an indwelling catheter to prevent urinary retention.

- 2nd degree trauma should be sutured in order to improve healing. If a woman chooses not to be sutured, evidence of information and advice given must be documented.
- Perineal trauma should be repaired using an aseptic technique.
- Repair of the perineum should be undertaken as soon as possible to minimise the risk of infection and blood loss.
- Perineal repair should only be undertaken after effective analgesia is ensured either by infiltration with up to 20 ml of 1% lidocaine or topping up the epidural. If the woman reports inadequate pain relief at any point this should be addressed immediately. Please note 19% women reported a 'lot of pain' during suturing and 12% of women reported suturing as the most painful part of childbirth.
- Good exposure and lighting is essential to see and identify the structures involved.
- An absorbable synthetic suture material should be used to suture the perineum.
- Identify the apex of the tear and use a surgical anchor knot to start 1cm above the apex of the tear.
- The vaginal wall and muscle layer should be repaired using a continuous non-locked suturing technique and the dead-space deep intramuscularly closed to prevent bleeding and lower the risk of infection.
- If the skin is neatly opposed after suturing the muscle there is no need to suture it. Where the skin does require suturing, this should be undertaken using a continuous subcuticular technique.
- Always finish with a surgical knot, ideally not at the fourchette.
- Good anatomical alignment of the wound should be achieved, and consideration given to the cosmetic result.
- Rectal examination should be carried out after completing the repair to ensure that suture material has not been accidentally inserted through the rectal mucosa.
- Rectal non-steroidal anti-inflammatory drugs (e.g. Diclofenac 100 mg) should be offered routinely following perineal repair provided these drugs are not contraindicated.

- Contraindications include postpartum haemorrhage, preeclampsia, renal disease, asthma, concurrent use of other NSAIDs.

- Information should be given to the woman about the extent of the trauma, pain relief, diet, pelvic floor and the importance of good hygiene.

- After completion of the repair accurately document on p44 of the yellow birth notes, with a drawing if needed, the following: consent, extent of the trauma, method of repair, type and number of sutures and swabs used ,. A second signature is required for the swab/needle count (this doesn't need to be a registered health professional ie. HCA but patients and relatives cannot be asked).

Community midwives should assess the perineum for signs of infection and wound breakdown with the woman's consent at **each postnatal check-up**. If any signs of infection are present, antibiotics should be prescribed via the GP (normally co-amoxiclav) and a swab taken. Research shows between 1:10-20 wounds breakdown. The wound will then heal by secondary intention which is a much longer and more painful process.

7. Episiotomy

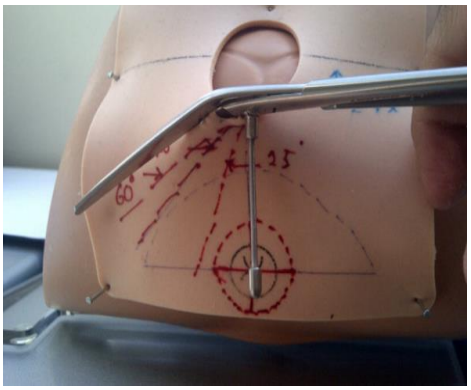
Episiotomy should not be performed routinely but only where there are concerns for the fetal well-being or multiple maternal risk factors for OASI.

- If it is a woman's 1st vaginal delivery and she requires a forceps delivery then an episiotomy is recommended.
- Most instrumental deliveries require an episiotomy.
- **Use Epi-scissors®** whenever they are available.

  Note- please rinse epi-scissors with tap water after use as bodily fluids can degrade the metal, and if any concerns regarding their sharpness then please attach yellow tag shown below so SDU can hand sharpen.

- Please see picture below for how to use these scissors- line up the guide with the anus. The hilt of the blade should be at the base of the fourchette. This means the episiotomy with commence just to the right of the fourchette. If the guide is in line with the anus the episiotomy will be at the correct 60 degree angle.
- If an effective epidural anaesthetic is in place it should be topped up for delivery with the patient upright to get best coverage of the perineal area or the perineum should be infiltrated with local anaesthetic.

- If a tear is imminent, an episiotomy may be necessary without local anaesthetic.
- A mediolateral episiotomy at 60^{O} angle is recommended to avoid an OASI. Ideally this would be using the Epi-scissors® as research shows practitioner inaccuracy on eye-balling the degree and length required. Do NOT dispose of these Epi-scissors® and make a note of their use in the birth register and birth notes.



8. Repair of 3rd or 4th degree tear

8.1 Identification of injury

The understanding of normal anal sphincter anatomy, adequate assessment of the obstetric trauma and appropriate repair are essential to maintenance of continence.

8.2 Prerequisites

- A repair should only be performed by a doctor who is experienced in anal sphincter repair (i.e. has attended a teaching session or course).
- For 4th degree tears a Consultant Obstetrician has to be informed and surgical opinion may be sought at the consultant's discretion.
- **A trainee obstetrician may carry out the repair but MUST be SUPERVISED by a Consultant Obstetrician or trained SpR.**
- Repair should be conducted in an operating theatre where there is access to good lighting, appropriate equipment and aseptic conditions.
- General or epidural/spinal anaesthesia needs to be given prior to the commencement of the procedure.

- It is important that informed consent is obtained prior to the procedure. This should be recorded in the obstetric notes.

8.3 Procedure

- The full extent of the injury should be assessed in lithotomy position by vaginal and rectal examination.
- In the presence of a 4th degree tear the torn rectal mucosa should be repaired with Polyglactin 3-0 interrupted, surgical knots pointing into the rectal lumen.
- The IAS should be repaired separately to the EAS with 3-0 PDS (Polydioxanone) or 2-0 Polyglactin (vicryl).Using an end-to-end technique only with interrupted or mattress sutures. The two different suture materials have similar outcomes.
- When the EAS is injured with a partial thickness (i.e. some 3b and all 3a tears) it should be sutured with 3/0 PDS (Polydioxanone) or 2-0 Polyglactin by an end-to-end technique only.
- If the EAS injury is a full thickness tear the same suture materials as above can be used in either an end-to-end or an overlapping technique with similar outcomes. Surgical knots should be buried to prevent knot migration to the skin.
- **Note there is a deep, superficial and subcutaneous part of the external anal sphincter**.
- Reconstruction of the torn perineal body is essential. Consider using a standard Vicryl suture for repair of the perineal body.
- A rectal examination should be performed after the repair to ensure that sutures have not been inadvertently inserted through the anorectal mucosa. If a suture is identified it should be removed.
- Ensure adequate documentation by using page 44 in the intrapartum care (yellow) notes.
- Complete a proforma for every OASI and a Datix
- There are packs containing all the necessary paperwork for OASIs in the drawers behind the desk on CDS.

8.4 Post-operative instructions

- Prevention of **constipation**:

  To reduce the risk of passing a large bolus of hard stool, which may disrupt the repair, a stool softener must be prescribed (e.g. lactulose) for 10 days.
- Prevention of **infection**: See

- Intravenous antibiotics in theatre (Co-amoxiclav 1.2g IV) and consider up to 3 days of oral co-amoxiclav 625mg TDS. Use alternative antibiotics if the patient has a Penicillin allergy:

- Mild Penicillin allergy: Cefuroxime 1.5g IV and Metronidazole 500mg IV in theatre (consider oral switch **Cefalexin** 500mg PO TDS and Metronidazole 400mg TDS for up to 3 days.

- Severe Penicillin allergy: Teicoplanin 400mg IV, Metronidazole 500mg IV and Gentamicin 240mg IV in theatre. (After this initial dose an individual consultation regarding ongoing management is required. A decision will need to be made regarding ongoing antibiotics as there is no straightforward oral switch for breastfeeding. Patients MAY choose to not continue with antibiotics after being counselled as there is only limited evidence of benefit.
  If ongoing antibiotics are felt to be necessary then follow with:
  - oral Metronidazole 400mg TDS for up to 3 days
  - **and** Teicoplanin 400mg IV at 12 hours and 24 hours after the first dose to complete the loading dose and then once every 24 hours to complete up to 3 days
  - **and** Gentamicin 240mg IV OD (if the gentamicin level at 20-24 hours after the first dose is <1mg/l to complete up to 3 days). No additional gentamicin levels are required if the renal function is normal. **Please note that metronidazole covers anaerobes, Teicoplanin covers Gram positive organisms and gentamicin covers Gram negative organisms. It is not sufficient to only use part of this combined regimen**

  - **Please clarify the allergy history carefully.** You may need to speak to the patient's GP or review their previous hospital records to determine the exact nature of the reaction (were there features of immediate type hypersensitivity or not) and what other antibiotics they have safely received in the past subsequent to the date of the reaction.

- **There is no straightforward oral switch for breastfeeding women with severe penicillin allergy. If it is necessary for antibiotics to continue, please contact microbiology in hours to discuss**

Pain control:
Regular oral analgesia, avoid opiates e.g. codeine or oramorph
Bladder care:
Insert a Ch 14 Foley catheter with Instillagel and leave on free drainage until patient fully mobile. Measure 2 voids and if small volume will require bladder scan. See bladder care maternity guideline .

8.5 OASI follow-up

- Appointment to be made for Perineal Follow-up Clinic at 6-8 weeks. This is run by a midwife and physiotherapist. Clinic diary in red folder in notes room on CDS. Appointment to be made before the woman is transferred to the ward.
- A red top referral for anorectal studies (to be performed 6-9 months post delivery) should be sent to Mr. Oppong's secretary at delivery.
- If a woman is experiencing anal incontinence or pain at 6-8weeks, referral is made to the specialist joint clinic with both gynae and colorectal specialists present.

9. Patient information

Patient information leaflet '*How to care for my stitches following the birth of my baby*' should be given for all types of perineal and anal sphincter trauma. Perineal checks must be carried out with consent by the **community midwife at every contact**. Any deviations from normality or signs of infection with OASI patients should be discussed with the on-call obstetric registrar or consultant. Signs of infection and wound breakdown in the perineum should be prescribed antibiotics via the GP or triage. **Be aware that this can be a route of severe infection - look for signs of sepsis and refer appropriately** (see Sepsis guideline).

Where there are communication or language support needs assistance can be obtained via patient advice and liaison service (PALS) and interpretation services.

10. Swab counts

- All swabs used in Maternity must be x-ray detectable, not less than 30 cm x 30 cm and have tails (this is the only type of swab available on labour ward).
- A 2 person swab count must be conducted prior to and following any procedure in which they are used.
- This must be clearly documented, together with the names and signatures of the persons conducting the swab count, within the birth record or surgical booklet, if procedure undertaken in theatre.

Any swabs/vaginal packs deliberately left in the vagina MUST be clearly documented together with a management plan for their removal.

11. Audit and monitoring

Audits of OASI are presented to Clinical Effectiveness Committee and Clinical Governance and Risk Management committee. Findings together with recommendations and action plan published in Risk Management (RM) Newsletter for dissemination of information to all staff.

Follow-up of rate and cause of returns for women with problems relating to all types of perineal repair is achieved via Datix incident reporting system. Readmission of all women should be reported. This feeds into RM strategy for review.

12. Record keeping

It is expected that every episode of care be recorded clearly, in chronological order and as contemporaneously as possible by all healthcare professionals. This is in keeping with standards set by professional colleges, i.e. NMC and RCOG. All entries must have the date and time together with signature and printed name.
Documentation with respect to perineal trauma:
Ensure adequate documentation by using the perineal repair template in the Birth Notes page 44.
Documentation should include:

- The extent of trauma.
- Analgesia used for repair
- Material used
- Technique used
- Swab and needle count prior to and on completion of procedure

- Documentation of advice given

Postnatal documentation

A sticker for OASI (see appendix 3) should be placed in the mother's management plan. Alternatively, a handwritten management may be documented for perineal or labial repair.

Appendix 1

This is a reminder for your midwife to talk to you about ways we can reduce tearing into your back passage during childbirth

Risk factors include:

1st vaginal delivery

Difficult delivery- instrumental delivery, length of 2nd stage (very quick or long)

Large baby, persistent back to back position, going past your due date, difficulties with delivery of shoulders, short perineum, Asian ethnicity, previous 3rd or 4th degree tear

Things you can do to protect you perineum (the area between your vagina and back passage)

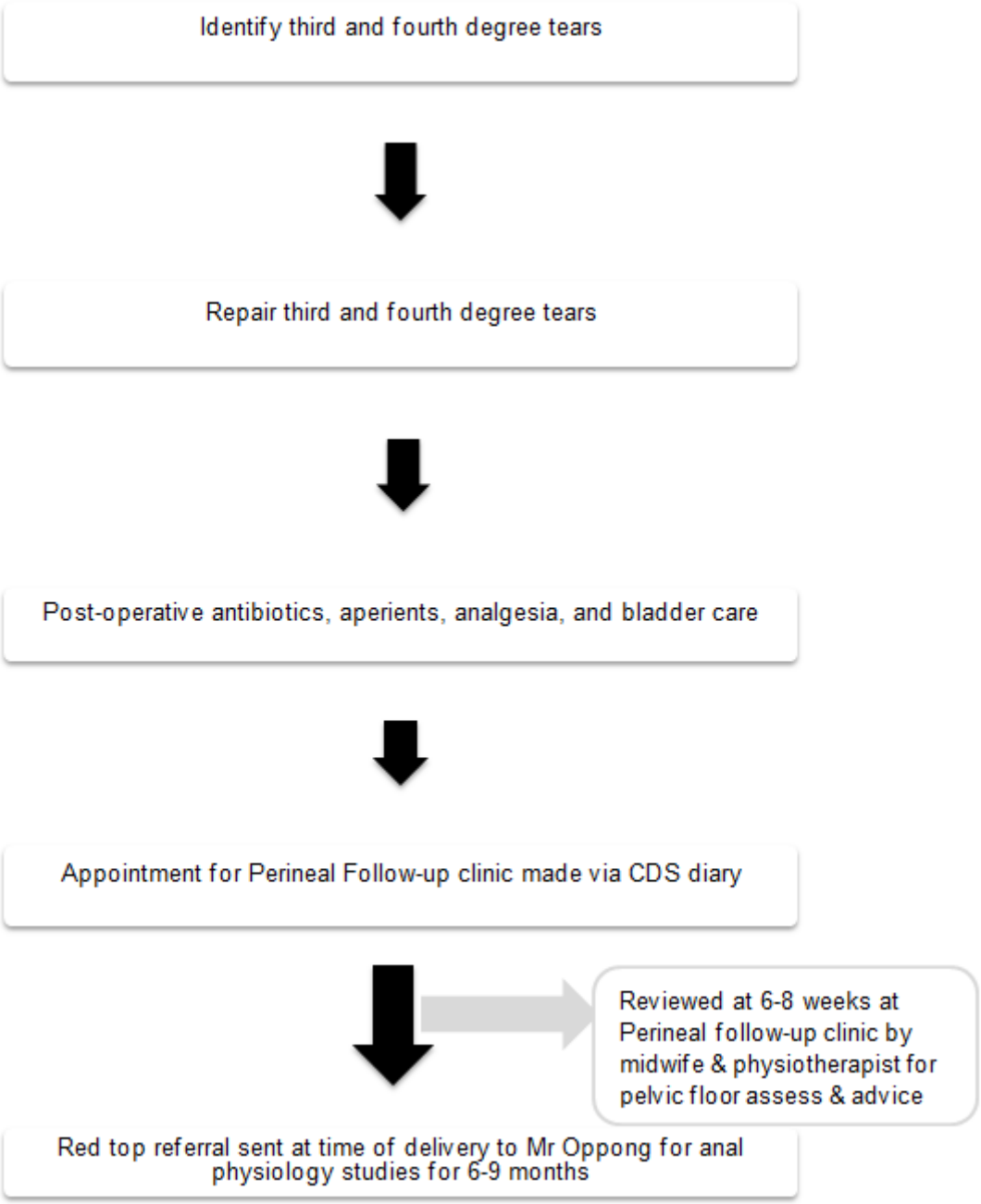
- Pelvic floors ie. Squeezy app
- Perineal massage from 35 weeks
- Warm compress in labour
- Birth position in the last moments before baby comes out. Lateral(on your side), semi recumbent(propped up on your back) & all fours are best. Lithotomy or squat are ideally not recommended.
- If you are gaining multiple risk factors then delivering in the birth pool is not recommended, this does not exclude you from labouring in the pool and getting out to deliver.
- Perineal protection during delivery. midwives hands on your perineum (not possible in water)
- If your midwife thinks you are at increased risk or imminently tearing she might suggest an episiotomy at a 60 degree angle to prevent a tear into your back passage.

Most importantly a controlled and slow delivery is best- so listen to your midwife, stay calm.

Please ask your midwife if you have any questions

Booklet 'perineal tears- for mums-to-be' given and discussed by midwife.

Sign/date……..


Identify third and fourth degree tears
Repair third and fourth degree tears
Post-operative antibiotics, aperients, analgesia, and bladder care
Appointment for Perineal Follow-up clinic made via CDS diary
Reviewed at 6-8 weeks at Perineal follow-up clinic by midwife & physiotherapist for pelvic floor assess & advice
Red top referral sent at time of delivery to Mr Oppong for anal physiology studies for 6-9 months

Appendix 3 – OASI Postnatal Management plan

Third / fourth degree tears (tick when done)

- Prevention of constipation - prescribe stool softener □
- Prevention of infection - IV antibiotics in theatre and consider oral swap for up to 3 days. □
- Regular analgesia prescribed □
- Bladder care - catheter in situ until fully mobile. Measure 2 voids and if small volume will require bladder scan. See bladder care protocol □
- Appointment for 6-8 weeks at Perineal Follow up clinic (red folder on CDS) . Date/time of app……
- Anorectal studies - red top referral sent (to be performed at 6-9 months post delivery) □
- Datix □
- Patient information leaflets given *'How to care for my stitches following the birth of my baby'* . □

Monitoring:

Auditable standards:
Antenatal- booklet discussing risk and prevention of OASI. And sticker for handheld notes

Postnatal OASI Performa and Datix

Audit of OASI- identify risk factors and preventative techniques used and follow up care

Management of 3 / 4 degree tears

Standards of record keeping in relation to all perineal trauma

Documented patient information and PIL

Audit of documentation and implementation of swab counts

Please refer to audit tool, location: 'Maternity on cl2-file11', Guidelines

Reports to:

Clinical Effectiveness Committee – responsible for action plan and implementation of recommendations from audit

Service Line Business Meeting

Care group quality assurance committee (QAC)

Frequency of audit:

continually

Responsible person:

CDS Manager

Training requirements

Audit of training needs compliance – please refer to TNA policy

Annual midwives training OASI prevention/diagnosis session (grand round for

doctors)

Suturing workshops

Training needs analysis:

Please refer to 'Training Needs Analysis' guideline together with training attendance database for all staff

Cross references

Maternity Hand Held Notes, Hospital Records and Record Keeping - http://staffnet.plymouth.nhs.uk/Portals/1/Documents/Clinical%20Guidelines/Maternity/Maternity%20hand%20held%20notes%20and%20hospital%20records.pdf?timestamp=1530627320058

Care of urinary bladder - http://staffnet.plymouth.nhs.uk/Portals/1/Documents/Clinical%20Guidelines/Maternity/EXPIRED%20Bladder%20care.pdf?timestamp=1530627275232

Sepsis, infection and prophylaxis in obstetric patients - http://staffnet.plymouth.nhs.uk/Portals/1/Documents/Clinical%20Guidelines/Maternity/Sepsis,%20infection%20and%20prophylaxis%20in%20obstetric%20patients.pdf?timestamp=1530627356080

References

OASI care bundle-Laine 2012 **Incidence of OASI after training to protect the perineum**

Episcissors-60 for guided mediolateral episiotomy. July 2015 Medtech innovation briefing [MIB33]

NICE recommendations for **Intrapartum care for healthy women and their babies.** NICE clinical guideline 190; published 2017, updated Feb 2017.

Royal College of Obstetricians and Gynaecologists (RCOG) Greentop guideline 29. **The management of 3rd and 4th degree perineal tears**. June 2015.

Royal College of Midwives 2012 **Evidence Based Guidelines for Midwifery-Led Care in Labour**- suturing the perineum

Keighley et al, 2016 **The social, psychological, emotional morbidity and adjustment techniques for women with anal incontinence following obstetric Anal Sphincter Injury.** BMC pregnancy and childbirth

Author	Lizzie Percy, Joseph Clarke, Professor Robert Freeman		
Work Address	Maternity Unit, Derriford Hospital, Plymouth, Devon, PL6 8DH		
Version	1		
Changes	OASI prevention including booklet and sticker OASI care bundle- hands on Training workshops in prevention, diagnosis and repair Episcissors Packs Risk factors for OASI Closer observation by community midwives for perineal infection Catheter post OASI can now be removed once patient fully mobile and 2 voids measured as per bladder guideline Antibiotics reduced to stat IV dose in theatre plus considering up to 3 days oral. Audit ongoing with this via follow up clinic		
Date Ratified	July 2018	**Valid Until Date**	July 2023