Management of Third and Fourth Degree Perineal Repairs

Document Type:	Clinical Guidelines
Ref:	MM199
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Executive Sponsor:	Choose an item.
Approved By:	Choose an item.
Approval / Effective Date:	March 2025
Review Date:	March 2028
Version:	2

Target Audience:

People who need to know about this document in detail	All midwifery and obstetric staff working within maternity services
People who need to have a broad understanding of this document	*As above*
People who need to know that this document exists	*As above*

Integrated Impact Assessment:

Equality Impact Assessment Date & Outcome	**Date: December 2024** **No negative impact**
Welsh Language Standard	Choose an item.
Date of approval by Equality Team:	(00/00/0000)
Aligns to the following Wellbeing of Future Generation Act Objective	Choose an item.

Disclaimer:
If the review date of this document has passed please ensure that the version you are using is the most up to date version either by contacting the author or CTM_Corporate_Governance@wales.nhs.uk

Guidelines Definition

Clinical guidelines are systemically developed statements that assist clinicians and patients in making decisions about appropriate treatments for specific conditions.

They allow deviation from a prescribed pathway according to the individual circumstances and where reasons can be clearly demonstrated and documented.

Minor Amendments

If a minor change is required to the document, which does not require a full review please identify the change below and update the version number.

Type of change	**Why change made**	**Page number**	**Date of change**	**Version 1 to 1.1**	**Name of responsible person**
New guideline for CTMUHB	Amalgamation of POW and CTUHB	all	31.03.2020	1	LW Forum
Revised update of guideline			December 2024	2	Fran Hodge Labour ward forum

Equality Impact Assessment Statement

This Procedure has been subject to a full equality assessment and no impact has been identified.

1. Introduction

Obstetric anal sphincter injuries (OASI) are caused by perineal trauma during vaginal birth. Also referred to as third- and fourth-degree perineal tears, these injuries involve the anal sphincter complex and, in more severe cases, anal mucosa. OASI is a leading risk factor for subsequent loss of bowel control (flatus and/or faeces) in women, affecting quality of life.

2. Definition and Classification of Perineal Tears

- **First degree tear** – injury to skin only
- **Second degree** – injury to the perineal muscles but not the anal sphincter
- **Third degree** – injury to the perineum, and/or vagina involving the anal sphincter complex:
    - **3a** – less than 50% of external anal sphincter (EAS) thickness torn
    - **3b** – more than 50% of EAS thickness torn
    - **3c** – both EAS and internal anal sphincter (IAS) torn.
- **Fourth degree** – injury to the perineum involving the anal sphincter complex (EAS and IAS) and anorectal mucosa.

- **Rectal buttonhole tear** – if the tear involves the rectal mucosa with an intact anal sphincter complex, it is by definition not a fourth degree tear. This has to be documented as a rectal buttonhole tear. If unrecognised this type of tear may lead to a rectovaginal fistula.

3. Risk Factors for Third and Fourth Degree Perineal Tears

- Asian ethnicity
- Nulliparity
- Birthweight greater than 4 kg
- Shoulder dystocia
- Occipito-posterior positions
- Duration of second stage of labour more than 2 hours (risk increases with time)
- Assisted births
- Previous OASI

Clinicians need to be aware that although there are known risk factors these do not allow the accurate prediction of OASI.
The position adopted for birth should be documented in the maternity notes. This should include evidence of manual perineal protection (MPP) being applied where appropriate.

4. Incidence of Obstetric Anal Sphincter Injuries

National rates of 6% for Primigravida and 2% for Multigravida (RCOG/RCM 2020).

All women should be informed antenatally (32-36 weeks) about OASI and what steps can be taken to minimise their risk.

Women should be given a copy of **OASI Care Bundle information leaflet**

5. Prevention of Obstetric Anal Sphincter Injuries

- Manual perineal protection (MPP) at crowning can be protective.
- MPP should not limit the woman's position, however if the position restricts visualisation of the perineum and the ability to use MPP, then the clinician should communicate with the woman that it may increase her risk of sustaining an OASI.
- Clinicians should explain to women that the evidence for the protective effect of episiotomy is conflicting.

N.B. However, there is evidence that a mediolateral episiotomy should be performed with assisted term births for nulliparous women as it appears to have a protective effect on OASI. However, in multiparous women, an episiotomy should be used for all term forceps births, but may occasionally be omitted with a ventouse/kiwi birth after considering and discussing the women's risk of sustaining an OASI.

N.B. Where episiotomy is indicated, the mediolateral technique is recommended, with ***CAREFUL ATTENTION*** *to ensure that the angle is 60 degrees away from the midline when the perineum is distended. This has been shown to be important in reducing the incidence of OASI*.

When an episiotomy is used, clinicians should ensure that they document the indications for episiotomy, the angle at which the episiotomy was performed, and the woman's consent for the episiotomy to be performed.

Recently there have been interventional studies using programmes which have successfully reduced OASI rates, all of which have

described manual perineal protection/'hands on' techniques. These include:

1. One hand to cup the head and to **control the speed and progress** of the presenting part.
2. The other hand **supports the perineum** using the thumb and forefinger on the lower part of the labia, firm pressure is used while flexing (curling in) the remaining 3 fingers and pushing them against the perineum.
3. As the face becomes visible use the middle finger of the perineal support hand to **assist with the birth of the chin** over the introitus.
4. Communicate sensitively with the Woman to refrain from pushing and **breathe the baby out slowly**.
5. Wait for restitution to occur, (still supporting the perineum) and encourage the Woman to **push gently to birth the shoulders.**
6. Continue MPP throughout the birth of the shoulders by **moving your non-dominant hand** to support the baby's body. Applying gentle axial traction until both shoulders are born.
7. **Clear documentation** of the use of manual perineal protection

- The Key Principles being:-**Coaching** the woman to avoid sudden expulsive pushing
- Maintaining **gradual progress** during birth of the head
- **No undue downward traction** during birth of the shoulders
- **Support the perineum** throughout the whole birth

- Warm compression applied to the perineum during the second stage of labour significantly reduces the risk of an OASI. The healthcare professional should offer to apply a warm compress (pad, swab or gauze) on the perineum as the baby's head stretches the perineal tissues.

6. Perineal Assessment

All women having a vaginal birth have a risk of sustaining OASI or isolated rectal buttonhole tears. Therefore a**ll women** should be offered a full examination, including a digital rectal examination, to assess the severity of trauma, particularly **prior** to suturing. Before assessing for genital / perineal trauma, 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

The examination should be performed in the immediate period following birth. If the perineum is found to be intact a buttonhole could present. Therefore, **all** women should be recommended to have a rectal examination **prior** to suturing even if it appears there is no trauma. The woman should be in the lithotomy position to allow adequate visual assessment of the degree of the trauma for the repair itself.

This assessment of the perineum should include:

- Visual assessment of extent of perineal trauma including the structures involved, apex of tear and amount of bleeding
- A digital rectal examination is advised to assess whether there has been any damage to the external anal sphincter (EAS) or internal anal sphincter (IAS) using a 'pill-rolling technique'.

On completion of the suturing of any perineal tear a further digital rectal examination should be recommended post-suturing to confirm no sutures were placed through the anorectal canal.

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.

When the external sphincter is torn, the ends of the muscle fibres of the sphincter tend to retract under the skin. Failure to recognise the extent of the trauma and to achieve complete repair can lead to long term sequelae such as faecal incontinence and recto-vaginal fistula.

Tissue is often oedematous and bleeding immediately post-birth making identification of muscle and repair difficult. Temporary placement of a tampon and flushing with warm water can help visualisation. Partial damage to the anal sphincter can have as much impact on future continence as complete disruption.

7. Repair of Obstetric Anal Sphincter Injuries

7.1 General principles

Repair of third- and fourth-degree tears should be conducted by an appropriately trained clinician or by a trainee under supervision.

Repair should take place in an operating theatre, under regional or general anaesthesia, with good lighting, in lithotomy position and with appropriate instruments.

If there is excessive bleeding, a vaginal pack should be inserted and the woman should be taken to the theatre as soon as possible. All women should have a band in place on the woman's wrist to alert the team of a planned object left in place. Once the object is removed in theatre please remove the band. If the woman leaves theatre with a planned object in situ a new band should be applied.

As in any circumstance where mother and baby are separated soon after birth, skin to skin contact should be encouraged between baby and father, co-parent or birth partner, if this is possible, until mother and baby skin contact can be resumed.

Repair of OASI in the birth room may be performed only in certain circumstances after discussion with a senior obstetrician (NICE 2015).

Figure of eight sutures should be avoided during the repair of OASI because they are haemostatic in nature and may cause tissue ischaemia.

If a suture is identified in the anorectal canal on digital rectal examination after the repair it should be removed.

See Appendix A for the OASI Repair Form.

7.2 Antibiotic Cover

Prior to commencement of suturing at least one dose of intravenous broad spectrum antibiotics should be administered. See appendix C for current CTMUHB Antimicrobial Guidelines.

7.3 Repair of anorectal mucosa

The torn anorectal mucosa should be repaired with sutures using either the **continuous** or **interrupted** technique. The knot can be either placed caudally in the anorectal canal or cranially facing the perineal muscles. **3-0 polyglactin** (Vicryl) should be used to repair the anorectal mucosa.

The use of polydioxanone (PDS) sutures for repair of the anorectal mucosa should be avoided as they take longer to dissolve and may cause discomfort in the anal canal.

7.4 Repair of Internal Anal Sphincter

Where the torn internal anal sphincter (IAS) can be identified, it is advisable to repair this separately with **interrupted** or **mattress** sutures without any attempt to overlap the IAS. Either monofilament sutures such

as **3-0 polydioxanone** (PDS) or braided sutures such as **2-0 polyglactin** (Vicryl) can be used with equivalent outcomes.

7.5 Repair of External Anal Sphincter

For repair of a full thickness external anal sphincter (EAS) tear, either an **overlapping** or an **end-to-end** (approximation) method can be used with equivalent outcomes.

For partial thickness (all 3a and some 3b) tears, an end-to-end technique should be used.

Either monofilament sutures such as **3-0 polydioxanone** (PDS) or modern braided sutures such as **2-0 polyglactin** (Vicryl) can be used with equivalent outcomes.

When obstetric anal sphincter repairs are being performed, the burying of surgical knots beneath the superficial perineal muscles is recommended to minimise the risk of knot and suture migration to the skin.

<u>The discharging midwife on the postnatal ward will ensure a referral form is completed for:-</u>

- A postnatal follow-up in OASI clinic
- Physiotherapy

8. Postoperative management

The woman should be given a full explanation of:-

- The nature of the tear
- The repair performed
- Post-operative management: hygiene, laxatives, antibiotics and analgesia
- Postnatal management: hygiene, physiotherapy and follow-up appointments

The RCOG patient information leaflet should be given and discussed prior to discharge.

Pain control: Regular oral analgesia, avoid opiates e.g. codeine or oral morphine

Following an epidural top up/ spinal, observations must be carried out according to CTMUHB post-operative guidelines.

The use of broad-spectrum antibiotics is recommended following repair of OASI to reduce the risk of postoperative infections and wound dehiscence. In the absence of allergies the recommended regime for antibiotics should be given in line with CTMUHB Obstetrics and Gynaecology antibiotic guideline. See Appendix C for current CTMUHB Antimicrobial Guidelines.

The use of postoperative laxatives is recommended to reduce the risk of wound dehiscence. The recommended regime is lactulose 10mls BD for 10 days. Stress the need to avoid constipation – encourage fluids and fibre intake.

Bulking agents such as Ispaghula husk (Fybogel®) should **not** be prescribed/ given routinely.

Advice on hygiene – especially following bowel movements.

Women should be advised that physiotherapy following repair of OASI is beneficial and women should be encouraged to attend.

9. Follow-up post OASI

Review should take place in a dedicated OASI clinic at 12 weeks postpartum.

Post-op follow up should occur at the secondary care site within the locality where the woman lives.

If the woman is still experiencing incontinence or pain at follow-up, referral to a specialist urogynaecologist or colorectal surgeon for endoanal ultrasonography and anorectal manometry should be considered. All women who sustained OASI should be counselled about future modes of birth and this should be clearly documented in the notes.

Physiotherapy referral (prior to discharge) for 6 week post OASI repair and pelvic-floor exercises should be discussed prior to discharge.

The RCOG Patient information leaflet, Care of a 3rd or 4th degree tear during childbirth' (OASI) should be given and discussed.

10. Documentation

Documentation using the agreed pro forma with respect to perineal trauma should include:

- Place of repair
- The extent of trauma (anatomical structures involved)
- Analgesia used for repair
- Suture material used
- Technique used (method of repair)
- Swab and needle count prior to and on completion of procedure
- Information given to the woman about the nature of her tear
- Postnatal plan of care
- Documentation of advice/leaflets given and follow up appointments made

The person repairing the tear should complete a pro forma, as shown in appendix C.
A Datix incident form should be completed following any case of a third, fourth degree and buttonhole tear.

11. Prognosis for Women

Women should be advised that 60–80% of women are asymptomatic 12 months following birth and EAS repair.

Future births

There are no current randomized controlled trials (RCTs) to suggest the best method of birth following OASI. The risk of sustaining a further third- or fourth-degree tear is around 5-7% in the subsequent pregnancy (RCOG 2015.)
All women who sustained OASI in a previous pregnancy and have ongoing concerns or continence issues should be counselled by an obstetric registrar or consultant about the mode of birth at booking and this should be clearly documented in the notes. Women who sustained OASI in a previous pregnancy with no ongoing concerns or continence issues could be counselled by a consultant midwife in line with All Wales Midwife-led guidelines about the mode of birth and this should be clearly documented in the notes.
Reference should be made to the postnatal OASI clinic consultation.
All women who have sustained OASI in a previous pregnancy and who are symptomatic or have abnormal endoanal ultrasonography and/or manomertry should be offered the option of planned caesarean birth.

The role of prophylactic episiotomy in subsequent pregnancies is not known and therefore an **episiotomy should only be performed if clinically indicated.**

12. Training

All relevant healthcare professionals should attend training in perineal assessment and repair, and ensure that they maintain these skills.

A registered midwife may repair first and second degree perineal tears, episiotomies and uncomplicated labial tears once they have received appropriate training and have been deemed competent. Third and fourth degree repairs should be undertaken by someone appropriately trained and skilled i.e. obstetric registrar, obstetric consultant. Formal training in anal sphincter repair techniques should be an essential component of obstetric training.

13. Auditable Standards

- Incidence of an OASI compared with reported overall incidence of less than 3.5% in the UK. (NMPA)
- 100% evidence of adequate documentation of systematic examination of the vagina, perineum and rectum prior to suturing of an OASI.
- 100% of OASI repaired with documented evidence of type of analgesia, suture material, method of repair and grade of operator (compliance with documentation on the proforma).
- 100% of repairs should be carried out by trained clinicians
- 100% of women with OASI are referred to a follow-up appointment as outlined above.
- 100% of women with OASI referred to physiotherapy.
- 100% of women with OASI are datix reported

14. References

1. RCOG. The Management of Third- and Fourth-Degree Perineal Tears Green-top Guideline No. 29. June 2015.
2. Obstetric anal Sphincter Injury (OASI)- UpToDate (Nov 2019) accessed 9/12/19

15. Useful links and support groups

Bladder and Bowel Foundation

http://www.bladderandbowelfoundation.org/

Royal College of Obstetricians and Gynaecologists. *A third- or fourth-degree tear during birth: Information for you*. London: RCOG; 2015.

https://www.rcog.org.uk/en/patients/patient-leaflets/third--or-fourth-degree-tear-during-childbirth/

Perineal Massage during Antenatal Period –

https://www.rcog.org.uk/en/patients/tears/reducing-risk/

RCOG Patient information leaflet -

https://www.rcog.org.uk/globalassets/documents/patients/patient-information-leaflets/pregnancy/pi-third--or-fourth-degree-tear-during-birth.pdf

OASI Care Bundle –Implementation guide for maternity sites in roll-out phase

https://www.rcog.org.uk/globalassets/documents/guidelines/research--audit/oasi-care-bundle/oasi-care-bundle-guide-final-_-050118.pdf

https://www.rcog.org.uk/globalassets/documents/guidelines/research--audit/oasi-care-bundle/episiotomy-angle-cutter-demonstrater.pdf

https://www.rcog.org.uk/globalassets/documents/guidelines/research--audit/oasi-care-bundle/mpp-technique.pdf

https://www.rcog.org.uk/en/patients/patient-leaflets/third--or-fourth-degree-tear-during-childbirth/

Appendix A OASI Repair Form

OASI Repair Form

ADDRESOGRAPH

Date:

Time:

Anaesthesia:

Local/Spinal/Epidural/Both/General

Location: Theatre/Equivalent or Delivery Room

Parity: Nullip/Multip

Mode of delivery: SVD/Forceps/Ventouse/Both

Indication (if instrumental):_____

Length of 2nd stage: _____ hrs ____ mins

Shoulder dystocia: Yes/No

IOL: Yes/No

Position at delivery: OP/OA/OT

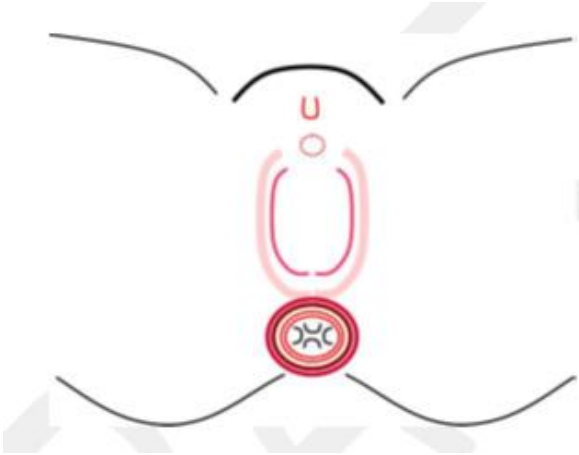
Birthweight:_____(kg)

Episiotomy: Yes/No

Previous 3rd/4th degree tear: Yes/No

Type of tear:3a (< 50% EAS) 3b (>50% EAS) 3c (EAS & IAS) 4th (Anal mucosa)

PR assessment to be undertaken to determine grade of tear
Grade of tear: 3A □ 3B □ 3C □ 4th □ Other:



Vaginal mucosa: Interrupted / Continuous
Perineal muscle: Interrupted / Continuous
Perineal skin: Interrupted / Continuous / Unsututred

All third and fourth degree tears should be sutured by a suitably trained obstetrician, with adequate regional anaesthesia in theatre.

Please ensure that local protocol and proformas completed in line with guidance.

Buttonhole

	Repair:	**Suture material:**
External anal spinchter (EAS)	Overlap/End to end/Other	3/0 PDS/Other
Internal anal spinchter (IAS)	Interrupted/Continuous/Other	3/0 PDS/Other
Anal mucosa	Interrupted/Continuous/Other	3/0 Vicryl/Other
Vaginal mucosa	Interrupted/Continuous/Other	2/0 Vicryl rapide/Other
Perineal body	Interrupted/Continuous/Other	2/0 Vicryl rapide/Other
Perineum	Interrupted/Subcuticular/Other	2/0 Vicryl rapide/Other

Following repair: PV done – Yes / No MBL:_____mls

PR done – Yes / No Pack – Yes / No

Swabs & Needles check – Yes / No Catheter – Yes / No

Tampon removed Yes/No/Not Inserted

A Vaginal Pack or any object intended to remain in situ should be indicated by an appropriate band indicating what is remaining in situ.

Object left in situ	**Band in place**	**Date and time inserted**	**Date and time for removal**

Date and time for removal .....

Name and Signature following removal .....

Postnatal management: Prescribed / Arranged

Antibiotic cover	Cefuroxime 1.5g IV & Metronidazole IV (stat)	Yes / No
	Cephalexin 500mg TDS (1week)	Yes / No
	Metronidazole 400mg TDS (1week)	Yes / No
Stool softeners	Lactulose 10mls BD (10 days)	Yes / No
Analgesia	Ibuprofen 400mg orally, TDS (1week) PRN	Yes / No
	Paracetamol 500mg 1gram orally, 4-6 hourly (1week)	Yes / No

Bowels opened prior to discharge	– Yes / No
Patient information leaflet	– Yes / No
TTH	– Yes / No
Referred to physiotherapy prior to discharge (6 weeks post birth)	- Yes / No
Follow up in OASI clinic (12 weeks post birth)	– Yes / No

Person undertaking repair

NAME	**Signature**	**Grade**

Supervision – Yes / No

Person undertaking Supervision

NAME	**Signature**	**Grade**

Appendix B Perineal tear (3rd/4th degree) – prophylaxis

PERINEAL TEAR (THIRD/FOURTH DEGREE TEAR INVOLVING ANAL/RECTAL MUCOSA)

First-line

Cefuroxime IV 1.5g and Metronidazole IV 500mg stat intra-operatively

THEN (third degree tears may not require more than one stat IV dose)**:**

Cefalexin (po) 500mg tds PLUS Metronidazole (po) 400mg tds

For 5 days total

Cephalosporin/severe penicillin allergy

****Do not omit gentamicin as this is required for Gram-negative coverage****

Gentamicin (IV) 5mg/kg stat (see dose banding table) intra-operatively

PLUS

Metronidazole (IV) 500mg stat intra-operatively

THEN (third degree tears may not require more than one stat IV dose):

ORAL SWITCH – discuss with Consultant Microbiologist

For 5 days total

References:

RCOG The Management of Third- and Fourth-Degree Perineal Tears Green-top Guideline No. 29 June 2015

Appendix C OASI Pro forma

PLEASE COMPLETE FOR ANY OASI AND FILE IN NOTES

Was the woman informed of OASI antenatally?	YES NO Comment -
Were risk factors identified and discussed?	Antenatally In Labour Not discussed
Was OASI discussed when woman in labour?	Yes No Don't Know
Was manual perineal protection MPP used?	Yes No N/A (e.g women birthing in water)
Was perineal massage performed	Antenatally In labour Not performed
Was perineal warm compress used?	Yes No N/A (e.g women birthing in water)
Mode of birth?	
Episiotomy performed? Extended episiotomy? Angle of episiotomy?	Yes No Yes No Degree
Documented reason for episiotomy?	Yes No
OASI category	
Completion of OASI repair form?	Yes No
Debrief for woman? Physiotherapy appointment (6weeks) OASI clinic appointment (12weeks)	Yes No Yes No Yes No