Prevention and Management of Third & Fourth Degree Tears

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Specialty: Maternity
Date Approved: February 2019
Approved by: W&CH Quality & Safety Group
Date for Review: February 2022

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Prevention and Management of 3rd & 4th Degree Perineal Tears

Background

Incidence: 2-4% of all vaginal deliveries.

Risk Factors for obstetric anal sphincter injuries (OASIS) – these do not readily allow prediction or prevention:

- Birth weight over 4 kg
- Persistent occipito-posterior position
- Nulliparity
- Second stage longer than two hours
- Midline Episiotomy – when episiotomy is indicated, a careful mediolateral technique should be used with careful attention to ensure that the angle is 60 degrees away from the midline when the perineum is distended.
- Forceps delivery
- Shoulder dystocia
- Asian ethnicity

Risk of recurrent OASIS in subsequent pregnancy include

- Asian ethnicity
- Forceps delivery
- Birthweight more than 4 Kg

Classification of perineal tears

1st degree tear:	Injury to perineal skin only
2nd degree tear:	Injury to perineum involving perineal muscles but not involving the anal sphincter
3rd degree tears:	Injury to perineum involving the anal sphincter complex
3a	<50% of external sphincter thickness torn
3b	>50% of external sphincter thickness torn
3c	internal sphincter torn as well
4th degree tear:	Injury to perineum involving the anal sphincter complex (EAS and IAS) and anal epithelium
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 not recognised and repaired, this type of tear may lead to a rectovaginal fistula.

Can obstetric anal sphincter injury be prevented?

- Clinicians should explain to women that the evidence for the protective effect of episiotomy is conflicting

- Mediolateral episiotomy should be considered in instrumental deliveries as it appears to have a protective effect on OASIS

- 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

- Perineal protection at crowning can be protective.
  These include:
  1. Left hand slowing down the delivery of the head.
  2. Right hand protecting the perineum.
  3. Mother NOT pushing when head is crowning (communicate).
  4. Think about episiotomy (risk groups and correct angle).

- Warm compression during the second stage of labour reduces the risk of OASIS

- Perineal massage during the last month of pregnancy and in second stage of labour been suggested as possible ways of enabling perineal tissue to expand more easily during birth.

Identification of obstetric anal sphincter injuries

- **All women having a vaginal delivery are at risk of sustaining OASIS or isolated rectal buttonhole tears. They should therefore be examined systematically, including a vaginal and digital rectal examination, to assess and classify the severity of damage as above, prior to suturing.**

Repair of OASIS

- **Intraoperative broad-spectrum antibiotic should be used to avoid infection. Suggested regime is : IV Cefuroxime 1.5 gm + metronidazole 500mg.**

General principles

- Repair should be carried out in the operating theatre
- Good anaesthesia - GA or regional anaesthesia (spinal or epidural)
- Good exposure and light are needed to be able to identify the retracted muscle of anal sphincter
- Repair should be performed by appropriately trained practitioners
- Use the specially prepared perineal pack - ‘Third degree pack’ that has been prepared for this purpose
- Figure of eight sutures should be avoided during the repair of OASIS because they are haemostatic in nature and may cause tissue ischaemia

- A rectal examination should be performed after the repair to ensure that the sutures have not been in advertently inserted through the anorectal mucosa. If a suture is identified it should be removed
- Repair of OASIS in the delivery room may be performed in certain circumstances after discussion with senior obstetrician.

<u>How to repair 3rd and 4th degree tear</u>

- The torn anorectal mucosa should be repaired with 3/0 polyglactin sutures using either the continuous or interrupted technique

- Where the torn IAS can be identified, it is advisable to repair this separately with interrupted or mattress sutures using 3-0 PDS or 2-0 polyglactin without any attempt to overlap the IAS

- For repair of a full thickness 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. 3-0 PDS or 2-0 polyglactin should be used

- 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

- Perineal body muscles are sutured with 2/0 Vicryl/vicryl rapide Interrupted/continuous

- Vaginal epithelium is sutured with 2/0 Vicryl rapide continuous non locking

- Perineal skin is approximated with 2/0 Vicryl rapide subcuticular suture.

NB*: Remember that the anal canal is at least 2cm long and the surgeon should try to maintain the length as well as the circumferential integrity*

Endo to end

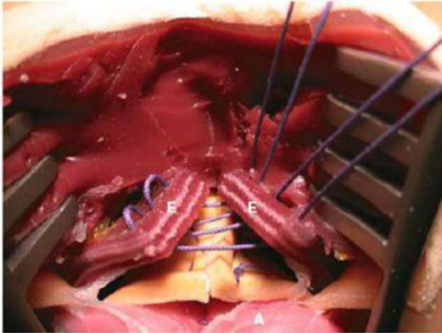


FIGURE 4.9. End-to-end repair of the external sphincter (*E*) using two mattress sutures (*I* internal sphincter, *A* anal epithelium).

Overlap

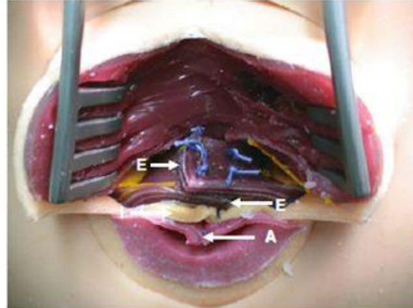
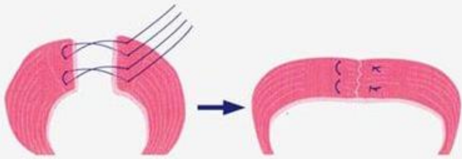


FIGURE 4.6. Repair of a fourth degree tear (demonstrated on a model) using the overlap repair technique of the external sphincter (*E*). The anal epithelium (*A*) and the internal sphincter (*I*) have also been repaired.

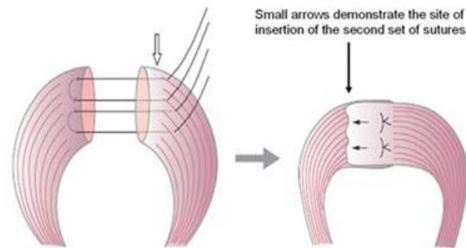
Approach to repair—3rd & 4th degree

- Indication for consult to Ob/Gyn

End-to-end primary anal sphincter repair
using figure-of-eight sutures
Sultan AH et al 1999 (BJOG)



Primary overlap anal sphincter repair
Sultan AH 2006 (redrawn from Sultan et al 1999)



Immediate aftercare (see 3rd & 4th degree proforma)

Explanation of the nature of the injury and the repair performed:

Postoperative: Oral Cefalexin + Metronidazole for 7 days
Stool softeners: Lactulose 10 ml tds x 2 weeks
Bulking agent: should not be given routinely with laxatives
Stress the need to avoid constipation – encourage fluids/fibre intake etc.
Advice on hygiene – especially following defecation.

Follow-up:

All women who suffer a third/fourth degree perineal tear should have a:

- Physiotherapy appointment arranged prior to discharge from hospital

- Clinic appointment arranged in 6 – 12 weeks' time for discussion regarding symptoms if any and future plans for childbirth:

  - In Singleton Hospital all patients should be reviewed in Suite 17 for follow up. Appointment should be arranged before patient's discharge;

  - In Princess of Wales Hospital, women have a follow up appointment at 12 weeks. If symptomatic will be offered an endoanal scan and referral to Suite17, Singleton Hospital.

- Detailed explanation of the extent of trauma prior to discharge and advised that if there is concern about infection or poor bowel control, they should see their midwife or GP and be referred to hospital.

The effect of the repair may deteriorate over time (even as late as 12 months later) so women must be advised to report any future deterioration to their GP.

Future pregnancies

- All women who sustained OASIS in a previous pregnancy should be counselled about the mode of delivery and this should be clearly documented in the notes
- The role of prophylactic episiotomy in subsequent pregnancies is not known and therefore an episiotomy should only be performed if clinically indicated
- All women who have sustained OASIS in a previous pregnancy and who are symptomatic or have abnormal endoanal ultrasonography and/or manometry should be counselled regarding the option of elective caesarean birth.

GIG CYMRU NHS WALES | Bwrdd Iechyd Prifysgol Abertawe Bro Morgannwg University Health Board	Patient Label Please

Appendix 1

Third & Fourth Degree Tear Repair Date: ……../………./…………

Anaesthesia: **Location:** **Consultant:** **Consultant informed:** **Time of Repair**:	Spinal/GA Epidural/Local Operating Theatre Delivery Room Yes/No	**Delivery Details** Mode of delivery: Birth weight: Head circumference: **Delivery - Repair Interval:**

1. **Findings and Repair Technique**

	Extent of Injury Classification	Suture Material	Method of Repair
Vaginal Mucosa	1°	Vicryl Rapide 2/0	Continuous locking / non locking
Perineal body	2°	Vicryl 2/0	Interrupted / Continuous
External Anal Sphincter	3A<50% ☐ 3B>50% ☐	Vicryl 2/0 / PDS 3/0	End to end / overlap
Internal Anal Sphincter	3C	Vicryl 2/0 / PDS 3/0	End to end
Anal Mucosa	4°	Vicryl 3/0	Interrupted / Continuous

Measured Blood Loss: ________________ PR Voltarol: Yes/No

End of procedure Swabs and Needles and instrument check: Yes/No

Swabs:_________________ Needles:_______________ Instruments:________________

Signature: Surgeon: **Midwife**:

2. Postoperative Management

	Prescribed
Stool Softeners Lactulose 10 mls twice per day	Yes/No
Antibiotic Cover Intra-op IV antibiotics: ______________________________________ Post-op: Cefalexin 500 mgs tds & Metronidazole 400 mgs tds 1/52 Other antibiotics	Yes/No Yes/No Yes/No
Analgesia Diclofenac / Ibufrofen Dose: _________orally 3 times a day for 5-7 days Paracetamol Dose: 1 gm 3-4 times a day	Yes/No Yes/No

Signature: **Grade SpR Year (ST____) / Trust Grade / Consultant**

3. **Ward Management**

Discharge and Follow Up (to be completed and signed by discharging midwife) Bowels Opened Y / N TTO:- Lactulose Y / N Analgesia Y / N Antibiotics Y / N Pelvic Floor Exercise and Third / Fourth Degree Tear leaflets given Y / N One Copy – delivered to Suite 17 Pelvic Floor Clinic Singleton for Telephone follow up in 1 week Y / N Patient's preferred contact Tel. no. ________________________ (OK for message / text Y / N)

To arrange a follow up appointment at 3 months **Please photocopy this form and send to suite 17**	Arranged Yes/No

References

1) Thakar R, Sultan AH. Management of obstetric anal sphincter. The Obstetrician & Gynaecologist 2003: **5;** 2-78.

2) Sultan AH, Thakar R. Lower genital tract and anal sphincter trauma. Best Pract Res Clin Obstet Gynaecol 2002: **16;** 99-116.

3) Kettle C, Hills R K, Jones P, Darby L, Gray R, Johanson R. Continuous versus interrupted perineal repair with standard or rapidly absorbed sutures after spontaneous vaginal birth: a randomised controlled trial. Lancet 2002: **359**; 2217-2

4) Royal College of Obstetricians and Gynaecologists, June 2015. Clinical Green Top Guideline No: 29: Management of third and fourth degree perineal tears. RCOG Press, London.

Maternity Services

Checklist for Clinical Guidelines being Submitted for Approval

Title of Guideline:	Prevention and Management of Third and Fourth Degree Tears
Name(s) of Author:	
Chair of Group or Committee approving submission:	Labour Ward Forum
Brief outline giving reasons for document being submitted for ratification	To update current guideline to reflect change in service
Details of persons included in consultation process:	Labour Ward Forum/all obstetric consultants and lead midwives
Name of Pharmacist (mandatory if drugs involved):	N/A
Issue/Version No:	3
Please list any policies/guidelines this document will supercede:	Guideline for the Management of Third & Fourth Degree Tears
Date approved by Group:	February 2019
Next Review / Guideline Expiry:	February 2022
Please indicate key words you wish to be linked to document:	Third, fourth, perineal, tear, episiotomy,suture
File Name: Used to locate where file is stores on hard drive	Z:\npt_fs2\Maternity Incidents Stats Etc\Policies\Ratified - Obs