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Clinical Guideline for: The Management of Perineal Trauma following Childbirth

For Use in:	Maternity Services
By:	Medical, Midwifery and Theatre staff
For:	Women sustaining perineal trauma following childbirth
Division responsible for document:	Women and Children
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Background

Approximately 90% of women will experience some degree of perineal trauma following vaginal delivery. Trauma can occur spontaneously during vaginal birth or by an episiotomy – though it is possible to have both (for example an episiotomy may extend into a third degree tear).

Perineal damage can have a major adverse impact on women's health and mismanagement of perineal trauma is a source of obstetric litigation. Long-term morbidity associated with anatomically incorrect approximation of wounds or unrecognised trauma to the external anal sphincter can lead to major physical, psychological and social problems.

Classification of perineal tears

- First degree: injury to the **skin only**
- Second degree: involvement of the **perineal muscles** but not the anal sphincter
- Third degree: injury to the perineum involving the **anal sphincter complex** (external anal sphincter [EAS] and internal anal sphincter [IAS]).
  - 3a: less than 50% of EAS thickness torn
  - 3b: more than 50% of EAS thickness torn
  - 3c: IAS torn
- Fourth degree: injury to the perineum involving the anal sphincter complex AND the **anal epithelium**

Third and fourth degree tears are uncommon, probably complicating up to 2.5 to 4% of all deliveries, but they can lead to devastating long-term complications such as faecal incontinence. Diagnosis and satisfactory primary repair is essential.

Prediction and prevention of anal sphincter tears

Risk factors for anal sphincter trauma include:

- Primiparity (up to 4%)
- Birth weight > 4 kg (up to 2%)
- Forceps delivery (up to 4%)
- Shoulder dystocia (up to 4%)
- Occipito-posterior position at delivery (up to 3%)
- Short perineum (<3cms)
- Epidural analgesia (up to 2%)
- Induction of labour (up to 2%)
- Midline episiotomy (up to 3%)

The risk factors identified cannot readily be used to prevent the occurrence of extensive perineal trauma. Delivery in left lateral position or all fours is associated with least trauma. Lithotomy position should be avoided in the final stages of normal birth. The clinician and the woman should work together to achieve a **slow and controlled birth**, be this 'hands on' or 'hands poised'.

Where episiotomy is indicated, the mediolateral technique is recommended, with careful attention to the angle cut away from the midline. Aim at an angle of 45^0-60^0 and ensure the cut is sufficient to prevent the episiotomy extending into the anal sphincter.

Who can perform the repair?

Be aware of your limitations-if in doubt, call for more experience assistance. Midwives with appropriate skills and experience can repair first degree tears, episiotomies and second degree tears. Assistance should be sought from obstetric team if the midwife has any doubts. Junior obstetric staff can repair first, second and 3rd degree tears with or without supervision depending on experience. Consultant obstetricians can repair all types of perineal tears. A senior obstetrician (senior registrar or consultant) must be involved in deciding who can repair a tear or episiotomy that has completely divided the anal sphincter and/or anorectal mucosa.

Clinical assessment of the perineum and lower vagina

Women who have sustained perineal trauma should have systematic examination of the vagina, perineum and rectum for an accurate evaluation of any trauma sustained prior to suturing and the findings should be clearly documented in the notes. The woman should usually be in lithotomy position with adequate lighting.

When non-suturing may be applicable

Where the skin edges of a first degree tear are well apposed, it can be left unsutured and allowed to heal naturally.

Methods and materials used in perineal repair

1. Ensure adequate analgesia.
2. Ensure adequate exposure.
3. Ensure correct apposition of the tissue layers.
4. First degree tears should normally be sutured in order to improve healing (see above when non-suturing may applicable). Vaginal epithelium should be closed with continuous non-locked 2/0 Vicryl rapide® suture and perineal skin with continuous subcuticular 2/0 vicryl rapide® suture.
5. In a second degree tear, perineal muscles should be approximated with continuous 2/0 Vicryl rapide® sutures. The skin is closed in the same way as for a first degree tear. Uncomplicated episiotomies should be repaired in the same manner (extended episiotomies should be repaired by appropriately skilled practitioners).
6. The use of a continuous absorbable subcuticular suture is associated with less short term pain, but the long term effects on pain and dyspareunia are less clear
7. Ensure that swabs, instruments and needle count is correct after the repair has been completed, and that there are no abnormalities on rectal or vaginal examination. Swab and sharp counts should be documented clearly before and after the procedure in the woman's health record. Wherever possible, two signatures from health professionals are required at both counts.
8. If a swab or instrument is to be left in situ for transfer to theatre for repair, 2 x green bracelets must be placed alongside the ID bracelets on ankle and wrist. These must be removed immediately after removal of swab or instrument.
9. Ensure that adequate post-partum pain relief is prescribed[6]. This will usually include Diclofenac® 100mg PR unless contraindicated.
10. Ensure that adequate operation notes are made. Refer to standards of good record keeping on page 4.
11. Advice should be given about perineal hygiene, avoidance of constipation and pelvic floor exercises.

Documentation of consent for all types of perineal repair

Verbal consent is adequate for first/second degree perineal tears and uncomplicated episiotomies – but this should be documented in the notes. For more complicated trauma and for 3rd/4th degree tears written consent must be obtained using the approved procedure-specific consent form.

Management of third- and fourth-degree perineal tears

Diagnosis should be confirmed by an obstetrician with appropriate experience. Inform the senior resident obstetrician, who should decide who should repair a tear or episiotomy that has completely divided the anal sphincter and/or anal epithelium. Obtain consent (see above recommendations).

Intravenous access should be established and blood sent for FBC/G & S

Inform anaesthetist and arrange for the patient to be transferred to theatre, where formal repair can be undertaken with all the advantages of aseptic conditions, good light, good exposure, adequate assistance and appropriate instruments.

The inherent tone of the sphincter muscle often causes torn muscle ends to retract, so adequate muscle relaxation is necessary to retrieve the ends and repair them without tension. Therefore, all repairs should be performed under regional (spinal or epidural) or general anaesthesia - it is **NOT** acceptable for the repair to be attempted using local anaesthetic.

The full extent of the injury should be evaluated by a careful vaginal and rectal examination in the lithotomy position and graded according to the above classification. (**NB.** In acute obstetric trauma it is not always possible to identify the IAS – but the extent of damage to the EAS should be recorded in all cases). In the presence of a fourth degree tear, the torn anal epithelium should be repaired with interrupted 3/0 Vicryl® sutures with the knots tied in the anal lumen.

The sphincter muscles should be repaired using 3/0 PDS® sutures. Although alternatives sutures, such as nylon or Prolene® are also acceptable, they can cause stitch abscesses and the sharp ends can cause discomfort requiring removal.

There is some evidence that primary repair of the anal sphincter is best achieved by means of an overlapping repair, rather than conventional end-to-end approximation with a “figure of 8” suture. This suggestion was disputed by a subsequent prospective, randomised controlled trial that compared conventional end-to-end repair and the overlap technique and found no significant differences in continence rates at three months’ follow-up. Either technique seems to be appropriate.

Great care should be exercised in reconstructing the perineal muscles to provide support to the sphincter repair. Muscles of the perineal body are reconstructed with interrupted 2/0 Vicryl® sutures after closing the vaginal epithelium with a continuous 2/0 Vicryl® suture. Finally, the perineal skin should be approximated with a continuous subcuticular suture, as this is associated with less short term perineal pain and wound gaping[4].

- A rectovaginal examination is required to confirm complete repair and to ensure that all tampons and swabs have been removed.

- If a swab or instrument is to be left in situ for transfer to theatre for repair, 2 x green bracelets must be placed alongside the ID bracelets on ankle and wrist. These must be removed immediately after removal of swab or instrument.
- Administer prophylactic antibiotics:
  - Cefuroxime 1.5g I.V. and metronidazole 1g P.R. [9,10] followed by five days oral metronidazole 400mg tds and cefradine 500mg qds.
  - If penicillin allergic use Clindamycin 600mg I.V. and Gentamicin 160mg I.V. followed by clindamycin 300mg QDS PO for 5 days
- Offer rectal Diclofenac® 100mg- unless this is contraindicated[6].
- Insert indwelling urinary catheter in all women[7].
- Ensure that adequate operation notes are made. Refer to standards of record keeping on page 4.
- Ensure an incident form is completed.
- Prescribe a stool softener (Lactulose® 10ml b.d.) for five days. (Do not prescribe a bulking agent such as Fybogel as it has been shown this increases incontinence rates).
- Ensure that adequate analgesia (excluding constipating agents, such as codeine) is prescribed.

Postnatal follow up for women who have had third- or fourth-degree tear

1. Ensure that the patient is seen by one of the obstetric physiotherapists prior to discharge. The physiotherapist will arrange a six-week follow-up appointment. At weekends, the midwife should give the patient the information leaflet on perineal trauma and arrange a physiotherapy appointment.
2. Ensure that the patient has a twelve-week follow-up appointment in the perineal clinic to see the multi-disciplinary team, during which a careful history should be taken of bowel, bladder and sexual function. A vaginal and rectal examination should be performed to check for complete healing, scar tenderness and sphincter tone. All women with 3B, 3C and 4th degree tears are offered ano rectal manometry and endo anal ultrasound scan. Future delivery is recommended on the basis of these findings and the notes are reviewed by a consultant before recommendations for future delivery are made.

Standards for record keeping in relation to all types of perineal repair

Documentation must include the following:

1. Tear classification
2. Consent for suturing
3. Analgesia/anaesthesia
4. Repair technique and suture material
5. Vaginal and rectal examination at the end of the procedure

6. Documentation of swabs, needles and instrument count
7. Post-operative analgesia
8. Bladder care
9. Name, designation and signature of the clinician, and date

Support following the repair

All women who have suffered perineal trauma will be offered the "How to look after your perineum after having a baby" leaflet (M103). Women who have sustained more extensive perineal trauma will also be offered the "Third and Fourth degree perineal tears leaflet (M53).

Monitoring of complications of perineal trauma

The perineal wound and caesarean section surgical site surveillance form should be completed for all women who sustain a perineal tear. Any women returning to the hospital for review of their perineum following suturing should have the incident reported via the DATIX incident reporting system. There is a specific trigger under Departmental Triggers: Delivery suite; review of perineum.

Maternity service's expectations for staff training

Please refer to the maternity staff training needs analysis (TNA)

Auditing and Monitoring Compliance

The process for audit, multidisciplinary review of results and subsequent monitoring of action plans is detailed in the monitoring compliance table appendix 1.

Future pregnancies

All women with severe perineal trauma in their previous pregnancy should be counselled regarding the risk of developing anal incontinence or worsening symptoms with subsequent vaginal birth. If asymptomatic, there is no clear evidence as to the best mode of delivery, and no clear evidence to support the role of routine prophylactic episiotomy. We recommend vaginal birth on the basis of pressure study and endo anal ultrasound i.e. a patient can be completely asymptomatic and have a defect on the scan with low increment on squeeze pressure. A further vaginal delivery will increase the risk of faecal incontinence by 30-40%. We usually recommend caesarean section for these women. We acknowledge that this practice is debatable.

If symptomatic, the option of referral to a colorectal surgeon should be offered and subsequent delivery by caesarean section should be considered. There are no randomised controlled trials to suggest the best method of delivery following a previous third and fourth degree tear.

Some women with faecal incontinence may wish to defer any anal sphincter surgery until their family is complete. It is unclear whether these women should be advised to undergo a further vaginal delivery, since it could be argued that the damage has already occurred and that the risk of further significant damage is minimal.
Women who have had a previous successful secondary sphincter repair for faecal incontinence should be delivered by elective caesarean section.

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Element to be monitored	Lead Responsible for monitoring	Monitoring Tool / Method of monitoring	Frequency of monitoring	Lead Responsible for developing action plan and acting on recommendations	Reporting arrangements	Sharing and disseminating lessons learned and recommended changes in practice as a result of monitoring compliance with this document
a. Who can perform the repair	Clinical audit Lead/ PDMs	A formalised audit with reference to CNST requirements	3 Yearly audit or when Clinical risk identified regarding failure to follow guidance	Clinical Governance Lead	Departmental Clinical Governance meeting	The Lead responsible for developing the action plans will disseminate lessons learned via the most appropriate committee e.g. Clinical Effectiveness; Clinical Governance, Patient Safety and where appropriate, the Compliance Assurance Group.
b. Systematic assessment of the perineum and lower vagina for an accurate evaluation of any trauma sustained	Clinical audit Lead/ PDMs	A formalised audit with reference to CNST requirements	3 Yearly audit or when Clinical risk identified regarding failure to follow guidance	Clinical Governance Lead	Departmental Clinical Governance meeting	
c. When non-suturing may be applicable	Clinical audit Lead/ PDMs	A formalised audit with reference to CNST requirements	3 Yearly audit or when Clinical risk identified regarding failure to follow guidance	Clinical Governance Lead	Departmental Clinical Governance meeting	
d. Methods and materials used in perineal repair	Clinical audit Lead/ PDMs	A formalised audit with reference to CNST requirements	3 Yearly audit or when Clinical risk identified regarding failure to follow guidance	Clinical Governance Lead	Departmental Clinical Governance meeting	

e. Documentation of consent for all types of perineal repair (target 100% exceptions –only when patient having an urgent EUA)	Clinical audit Lead/ PDMs	A formalised audit with reference to CNST requirements	3 Yearly audit or when Clinical risk identified regarding failure to follow guidance	Clinical Governance Lead	Departmental Clinical Governance meeting	
f. Management of third and fourth-degree tears including: Repair in theatre under GA or regional broad spectrum antibiotics indwelling catheter inserted (100%)	Clinical audit Lead/ PDMs	A formalised audit with reference to CNST requirements	3 Yearly audit or when Clinical risk identified regarding failure to follow guidance	Clinical Governance Lead	Departmental Clinical Governance meeting	
g. A recto-vaginal examination should be performed and documented in all cases to confirm complete repair and ensure that all swabs and tampons have been removed (target - 100%; exceptions – zero)	Clinical audit Lead/ PDMs	A formalised audit with reference to CNST requirements	3 Yearly audit or when Clinical risk identified regarding failure to follow guidance	Clinical Governance Lead	Departmental Clinical Governance meeting	
h. Process for offering a 6 week postnatal appointment with a physiotherapist and a twelve week appointment in the perineal clinic (100%)	Clinical audit Lead/ PDMs	A formalised audit with reference to CNST requirements	3 Yearly audit or when Clinical risk identified regarding failure to follow guidance	Clinical Governance Lead	Departmental Clinical Governance meeting	
i. Standards for record-keeping in relation to all types of perineal trauma	Clinical audit Lead/ PDMs	A formalised audit with reference to CNST requirements	3 Yearly audit or when Clinical risk identified regarding failure to follow guidance	Clinical Governance Lead	Departmental Clinical Governance meeting	

j. Documentation of information given regarding support following the repair	Clinical audit Lead/ PDMs	A formalised audit with reference to CNST requirements	3 Yearly audit or when Clinical risk identified regarding failure to follow guidance	Clinical Governance Lead	Departmental Clinical Governance meeting	
k. Process for monitoring the rate and cause of returns of women with problems relating to all types of perineal repair	Clinical audit Lead/ PDMs	A formalised audit with reference to CNST requirements	3 Yearly audit or when Clinical risk identified regarding failure to follow guidance	Clinical Governance Lead	Departmental Clinical Governance meeting	
l. Maternity service's expectations for staff training, as identified in the training needs analysis	Clinical audit Lead/ PDMs	A formalised audit with reference to CNST requirements	3 Yearly audit or when Clinical risk identified regarding failure to follow guidance	Clinical Governance Lead	Departmental Clinical Governance meeting	